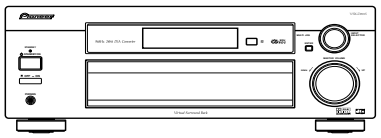
Pioneer *sound.vision.soul*

Service Manual



VSX-D811S-K

ORDER NO.
RRV2597

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D811S-K
VSX-D811S-S

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
VSX-D811S-K	MVXJI	AC230V	
VSX-D811S-K	YXJIEW	AC220-230V	
VSX-D811S-K	YXJIGR	AC220-230V	
VSX-D811S-S	MYXJI	AC220-230V	

For details, refer to "Important symbols for good services".

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ⓒ**PIONEER CORPORATION 2002**
T-ZZK APR. 2002.printed in Japan

SAFTY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

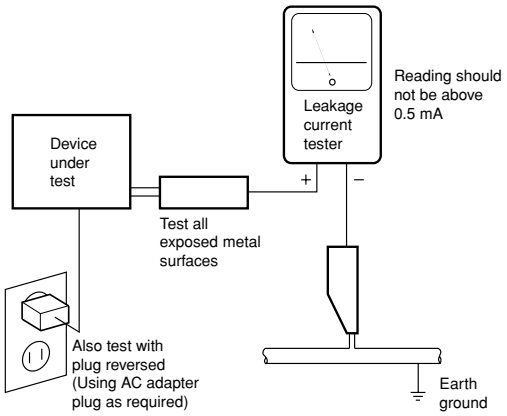
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

Amplifier Section

Continuous Power Output (STEREO mode)
Front ..... 100 W per channel (DIN 1kHz, THD 1.0 %, 8 Ω)

Continuous Power Output
Front ..... 100 W per channel (1kHz, THD 1.0 %, 8 Ω)
Center ..... 100 W (1kHz, THD 1.0 %, 8 Ω)
Surround ..... 100 W per channel (1kHz, THD 1.0 %, 8 Ω)
Surround Back ..... 100 W per channel (1kHz, THD 1.0 %, 8 Ω)

- Above specifications are applicable when the power supply is 230V.

Input (Sensitivity/Impedance)
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT ... 200 mV/47 kΩ

Frequency Response
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD,
TV/SAT ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$dB

Output (Level/Impedance)
VCR/DVR REC, CD-R/TAPE/MD REC ..... 200 mV/2.2 kΩ

Tone Control
BASS ..... ± 6 dB (100 Hz)
TREBLE ..... ± 6 dB (10 kHz)
LOUDNESS ..... +9 dB/+9 dB (100 Hz/10 kHz)

Signal-to-Noise Ratio [DIN (Continuous rated power output/50 mW)]
CD, VCR/DVR, CD-R/TAPE/MD,DVD/LD, TV/SAT ..... 96 dB

Video Section

Input (Sensitivity/Impedance)
VCR/DVR, DVD/LD, TV/SAT ..... 1 Vp-p/75 Ω

Output (Level/Impedance)
VCR/DVR ..... 1 Vp-p/75 Ω

Frequency Response
VCR/DVR, DVD/LD,TV/SAT ⇨ MONITOR ..... 5 Hz to 7 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio ..... 55 dB

Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double D symbol are trademarks of Dolby Laboratorories.

"DTS" ,"DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono:13.2 dBf, IHF (1.3 μV/ 75 Ω)
50 dB Quieting Sensitivity ..... Mono: 20.2 dB
Stereo: 38.6 dBf
Signal-to-Noise Ratio ..... Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Signal-to-Noise Ratio (DIN) ..... Mono: 62 dB
Stereo: 58 dB
Distortion ..... Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity ..... 60 dB (400 kHz)
Stereo Separation ..... 40 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz (±1 dB)
Antenna Input (DIN) ..... 75 Ω unbalanced

AM Tuner Section

Frequency Range ..... 531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 350 μV/m
Selectivity ..... 25 dB
Signal-to-Noise Ratio ..... 50 dB
Antenna ..... Loop antenna

Miscellaneous

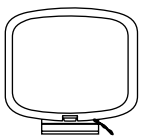
Power Requirements
UK model ..... AC 230 V, 50/60 Hz
European model ..... AC 220-230 V, 50/60 Hz
Power Consumption
VSX-D811S 280W
In Standby ..... 1 W
Dimensions ..... 420 (W) x 158 (H) x 401 (D) mm
Weight (without package)
VSX-D811S ..... 10 kg

Furnished Parts
AM loop antenna 1
FM wire antenna 1
Dry cell batteries (AA size IEC R6P) 2
Remote control 1
Operating instructions 1

Note

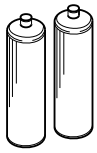
Specifications and the design are subject to possible modifications without notice, due to improvements.

Accessories

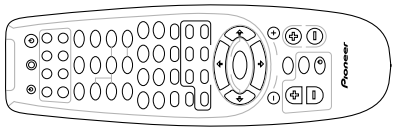


AM loop antenna
(ATB7009)

FM wire antenna
(ADH7005)



AA size IEC R6P
Dry cell batteries (x2)

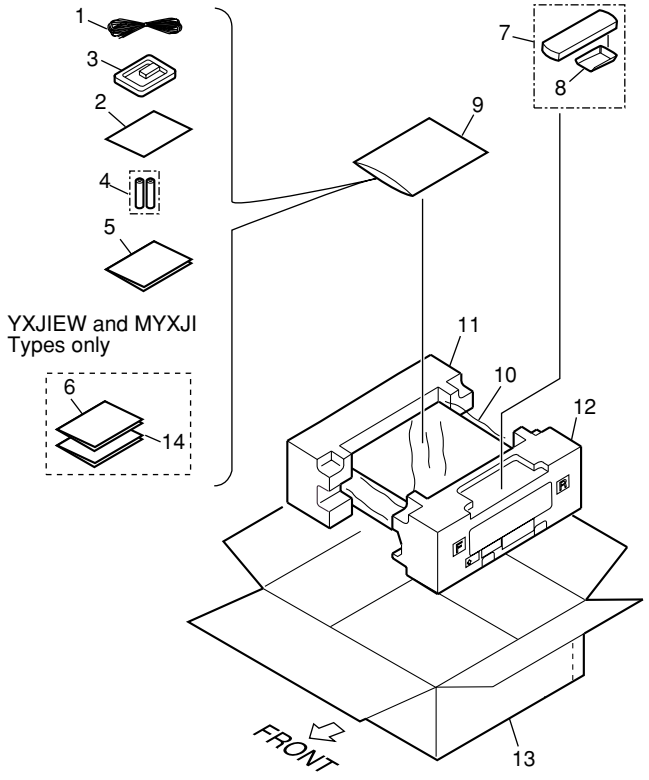


Remote control unit
(XXD3044)

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



(1) PACKING parts List

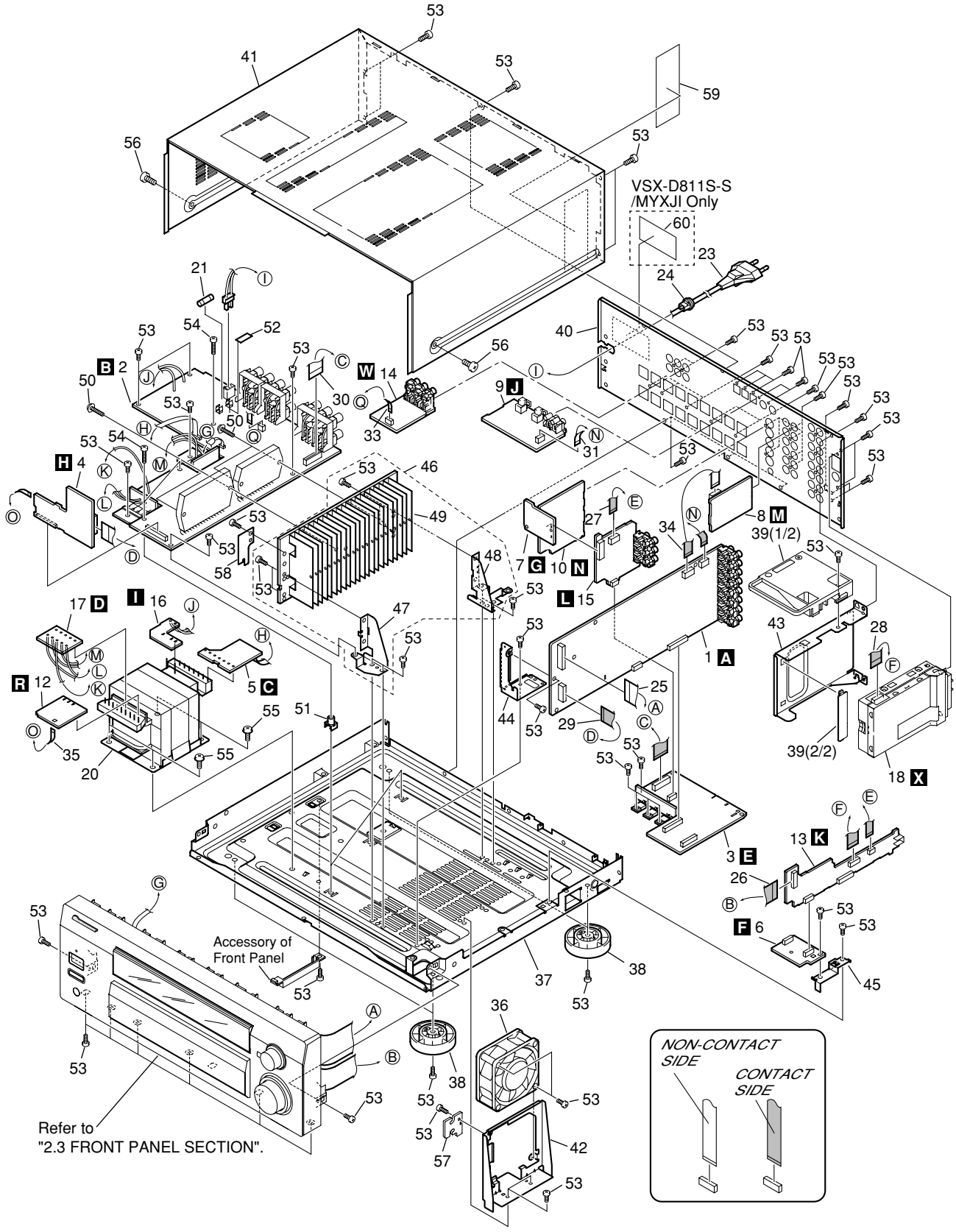
Mark	No.	Description	Part No.
	1	FM wire antenna	ADH7005
NSP	2	Warranty Card	ARY7022
	3	AM loop antenna	ATB7009
NSP	4	Dry cell batteries (IEC R6P)	VEM-013
	5	Operating instructions (English/German)	XRE3059
	6	Operating instructions (French/Italian)	See Contrast table (2)
	7	Remote Control Unit	XXD3044
	8	Battery Cover	XZA3002
NSP	9	Polyethylene Bag	Z21-038
	10	Packing Sheet	AHG7069
	11	Left Pad R5	XHA3032
	12	Right Pad R5	XHA3033
	13	Packing Case	See Contrast table (2)
	14	Operating instructions (Dutch/Spanish)	See Contrast table (2)

(2) CONTRAST TABLE

VSX-D811S-K/MVXJI, YXJIEW, YXJIGR and VSX-D811S-S/MYXJI are constructed the same except for the following :

Mark	NO	Symbol and Description	VSX-D811S-K/ MVXJI	VSX-D811S-K/ YXJIEW	VSX-D811S-K/ YXJIGR	VSX-D811S-S/ MYXJI	Remarks
	6	Operating Instructions (French/Italian)	Not used	XRC3060	Not used	XRC3060	
	13	Packing Case	XHD3207	XHD3207	XHD3207	XHD3295	
	14	Operating Instructions (Dutch/Spanish)	Not used	XRC3071	Not used	XRC3071	

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION parts List

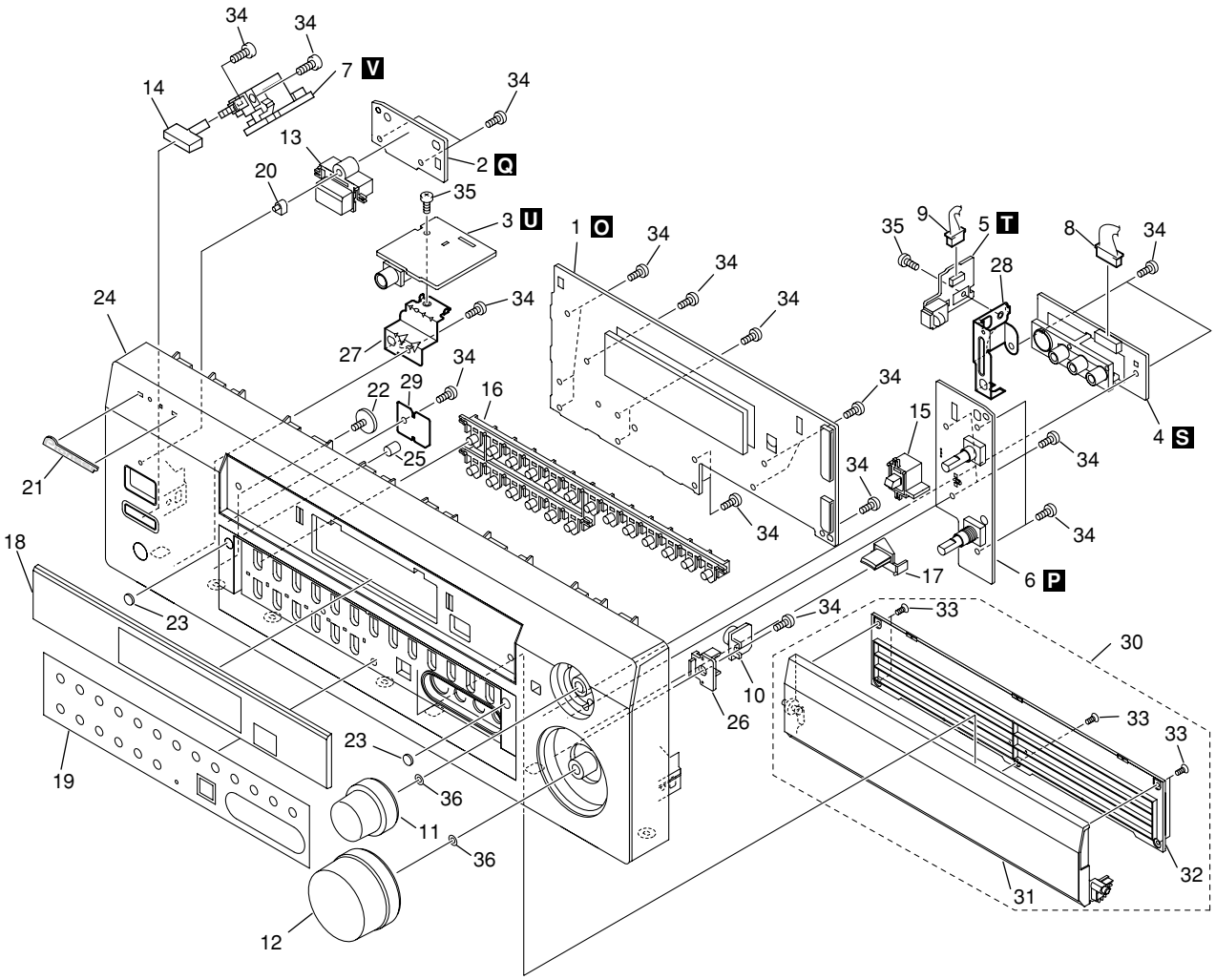
Mark	No.	Description	Part No.
	1	D.D & INPUT ASSY	XWX3049
	2	AMP & PRIMARY ASSY	XWZ3540
	3	REGULATOR ASSY	XWZ3546
	4	AMP INPUT ASSY	XWZ3551
	5	TRANS2 ASSY	XWZ3559
	6	HASHIGETA ASSY	XWZ3568
	7	BOARD TO BOARD ASSY	XWZ3577
	8	6CH IN ASSY	XWZ3508
	9	DIGITAL IN ASSY	XWZ3519
	10	S. VIDEO ASSY	XWZ3522
	11	• • • • •	
	12	TRANS4 ASSY	XWZ3526
	13	KAWA ASSY	XWZ3529
	14	PRE-OUT ASSY	XWZ3530
	15	VIDEO ASSY	XWZ3584
NSP	16	TRANS1 ASSY	XWZ3554
NSP	17	TRANS3 ASSY	XWZ3562
	18	FM/AM TUNER MODULE	AXQ7232
	19	• • • • •	
⚠	20	Power Transformer (T1)	XTS3063
⚠	21	FU1 (T3.15A)	REK1027
	22	• • • • •	
⚠	23	AC Power Cord	See Contrast table (2)
	24	Cord Stopper	CM-22B
	25	28P F•F•C/30V (J31) DD CN102 - FRONT CN402	XDD3097
	26	17P F•F•C/30V (J32) KAWA CN5001 - FRONT CN401	XDD3098
	27	7P F•F•C/30V (J33) KAWA CN5004 - VIDEO CN503	XDD3099
	28	13P F•F•C/30V (J34) KAWA CN5005 - FM/AM TUNER CN201	XDD3100
	29	19P F•F•C/30V (J35) DD CN106 - AMP INPUT CN254	XDD3101
	30	23P F•F•C/30V (J36) AMP CN53 - REGULATOR CN801	XDD3102
	31	7P F•F•C/30V (J37) DD CN9101 - DIGITAL IN CN1901	XDD3103
	32	• • • • •	
	33	7P F•F•C/30V (J46) AMP CN604 - PRE-OUT CN1575	XDD3105
	34	9P F•F•C/30V (J48) DD CN104 - 6CH IN CN307	XDD3106
	35	3P F•F•C/30V (J22) AMP INPUT CN251 - TRANS4 CN891	XDD3107
⚠	36	Fan Motor	XXM3002
NSP	37	Under Base 409	ANA7094
	38	Insulator	PNW2766
	39	FFC Cover R5	XMR3047
	40	Rear Panel	XNC3145
	41	Bonnet D510	See Contrast table (2)
	42	Fan Holder R4	XNG3040
	43	Tuner Shield R5	XNG3072
	44	PCB Angle R5	XNG3073
	45	Reg Support R5	XNG3074
NSP	46	Heat Sink Assy 0.4*40	XNH3020
	47	Heat Sink Angle F	ANG7251
	48	Heat Sink Angle R	ANG7252
NSP	49	Heat Sink	XNH3019
	50	Screw 3x23	ABA7043
	51	PCB Mold	AMR2533
	52	Fuse Card AAX7493	
	53	Screw	BBZ30P080FMC
	54	Screw	BBZ30P200FMC
	55	Screw	FBT40P080FZK
	56	Screw	See Contrast table (2)
NSP	57	Binder ASSY	XWZ3571
NSP	58	Holder ASSY	XWZ3574
	59	Tuner Sheet MY	XEC3031
NSP	60	N Label 811S/MY	See Contrast table (2)

(2) CONTRAST TABLE

VSX-D811S-K/MVXJI, YXJIEW, YXJIGR and VSX-D811S-S/MYXJI are constructed the same except for the following :

Mark	NO	Symbol and Description	VSX-D811S-K/ MVXJI	VSX-D811S-K/ YXJIEW	VSX-D811S-K/ YXJIGR	VSX-D811S-S/ MYXJI	Remarks
⚠	23	AC Power Cord	VDG1076	VDG1080	VDG1080	VDG1080	
	41	Bonnet D510	XZN3112	XZN3112	XZN3112	XZN3123	
	56	Screw	FBT40P080FZK	FBT40P080FZK	FBT40P080FZK	FBT40P080FNI	
NSP	60	N Label 811S/MY	Not used	Not used	Not used	XAL3113	

2.3 FRONT PANEL SECTION



(1) FRONT PANEL SECTION parts List

Mark	No.	Description	Part No.
	1	FRONT ASSY	XWZ3502
	2	POWER SW ASSY	XWZ3510
	3	H.P. ASSY	XWZ3513
	4	FRONT VIDEO ASSY	XWZ3515
	5	FRONT OPTICAL ASSY	XWZ3516
	6	R. ENCODER ASSY	XWZ3582
	7	MECHA SW ASSY	XWZ3514
NSP	8	8P Shielded Cable (J29)	XDX3012
NSP	9	6P Shielded Cable (J30)	XDX3018
	10	Damper Assy	AXA7052
	11	Select Knob R5	See Contrast table (2)
	12	Volume Knob R5	See Contrast table (2)
	13	Power Button R5	See Contrast table (2)
	14	Power Button R5M	See Contrast table (2)
	15	Jog Button R5	See Contrast table (2)
	16	Door Button R5	See Contrast table (2)
	17	B Lens R4	XAK3181
	18	D Panel R5 W	XAK3320
	19	BN Cover 811/MY	See Contrast table (2)
	20	Led Lens 1.6	XAK3308
	21	Pioneer Badge	See Contrast table (2)
	22	Screw DR 3x8W	XBA3010
	23	Cushion R4	See Contrast table (2)
	24	Front Panel	See Contrast table (2)
	25	Magnet R5	XMF3002
	26	Holder L R5	XMR3046
	27	Earth Plate R5 HP	XNG3066
	28	Earth Plate R5 D	XNG3067
	29	Magnet Cover R5	XNG3075
	30	Door Assy R5	See Contrast table (2)
NSP	31	Door R5	See Contrast table (2)
NSP	32	Door Cover R5	See Contrast table (2)
NSP	33	Screw 2x35	See Contrast table (2)
	34	Screw	PPZ30P080FMC
	35	Screw	BBZ30P080FMC
NSP	36	C Ring DIM 8.1	XBH3016

(2) CONTRAST TABLE

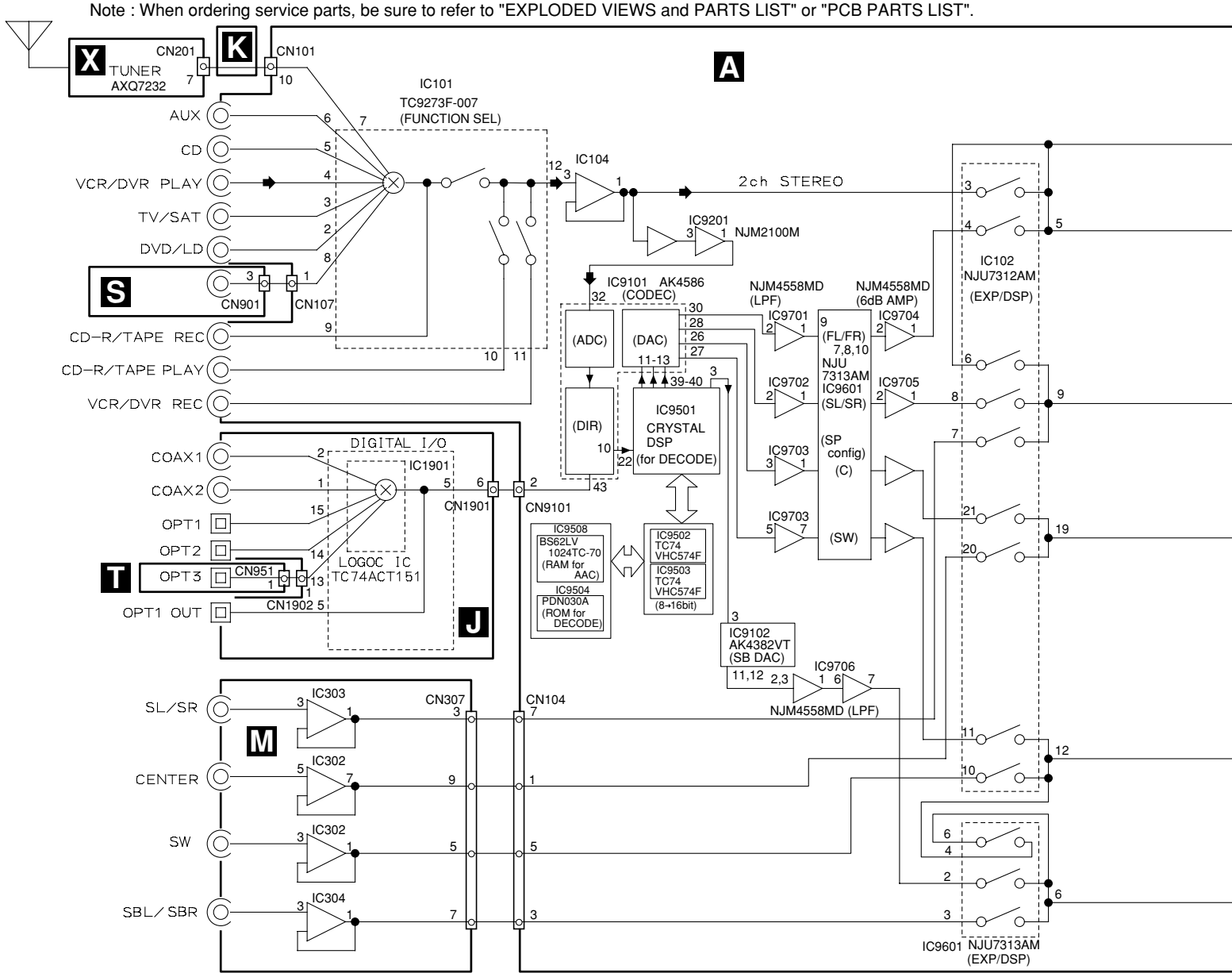
VSX-D811S-K/MVXJI, YXJIEW, YXJIGR and VSX-D811S-S/MYXJI are constructed the same except for the following :

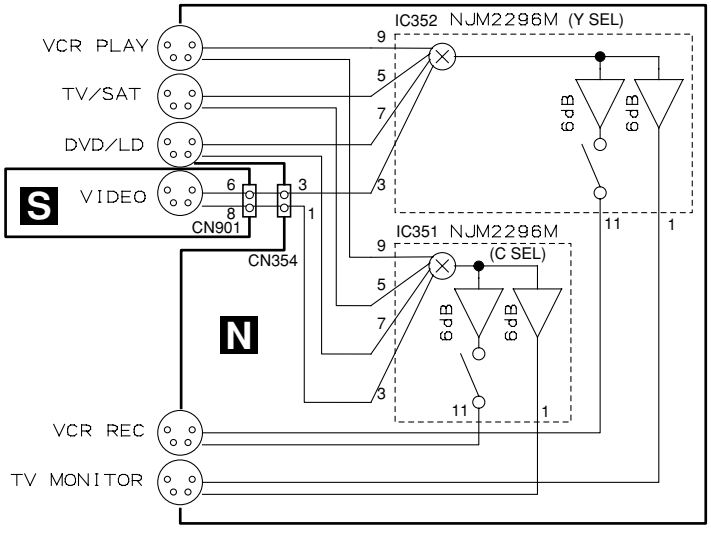
Mark	NO	Symbol and Description	VSX-D811S-K/ MVXJI	VSX-D811S-K/ YXJIEW	VSX-D811S-K/ YXJIGR	VSX-D811S-S/ MYXJI	Remarks
	11	Select Knob R5	XAB3023	XAB3023	XAB3023	XAB3024	
	12	Volume Knob R5	XAB3025	XAB3025	XAB3025	XAB3026	
	13	Power Button R5	XAD3123	XAD3123	XAD3123	XAD3129	
	14	Power Button R5M	XAD3127	XAD3127	XAD3127	XAD3137	
	15	Jog Button R5	XAD3124	XAD3124	XAD3124	XAD3131	
	16	Door Button R5	XAD3126	XAD3126	XAD3126	XAD3135	
	19	BN Cover 811/MY	XAK3292	XAK3292	XAK3292	XAK3289	
	21	Pioneer Badge	XAM3006	XAM3006	XAM3006	VAM1129	
	23	Cushion R4	XED3001	XED3001	XED3001	XED3003	
	24	Front Panel	XMB3067	XMB3067	XMB3067	XMB3073	
	30	Door Assy R5	XXG3091	XXG3091	XXG3091	XXG3093	
NSP	31	Door R5B	XAK3275	XAK3275	XAK3275	XAK3281	
NSP	32	Door Cover R5	XAK3276	XAK3276	XAK3276	XAK3283	
NSP	33	Screw 2x35	XBA3007	XBA3007	XBA3007	XBA3008	

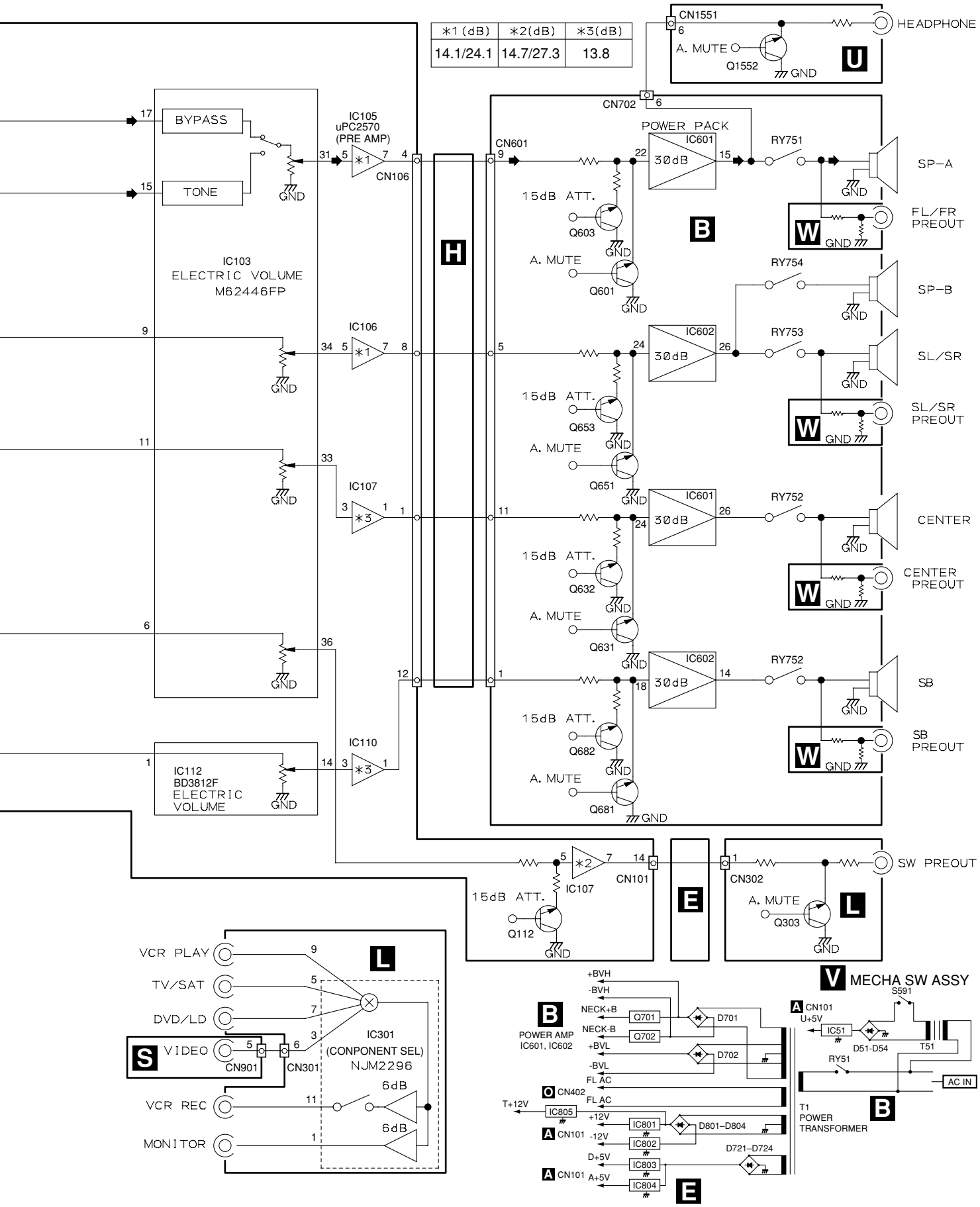
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

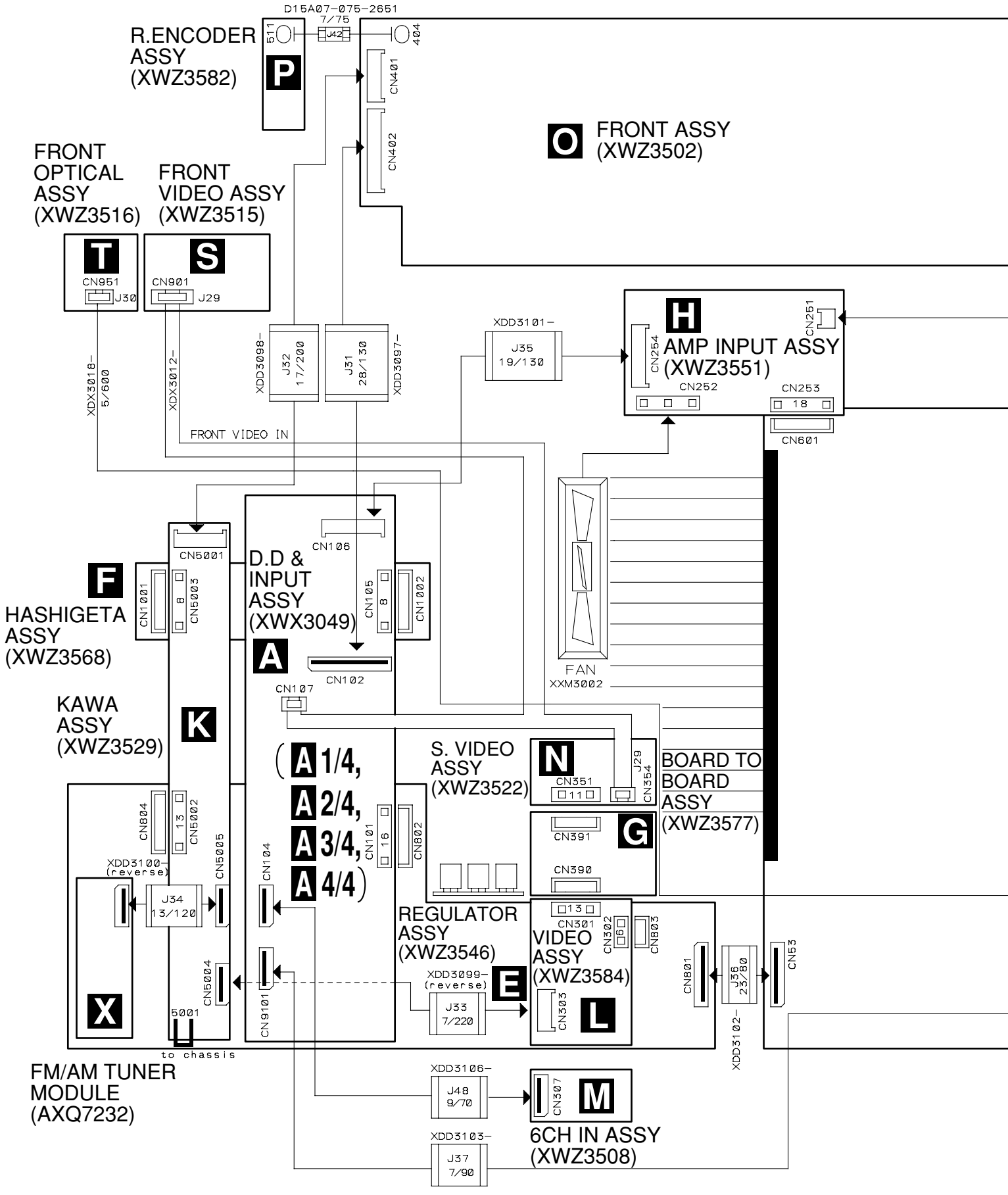
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

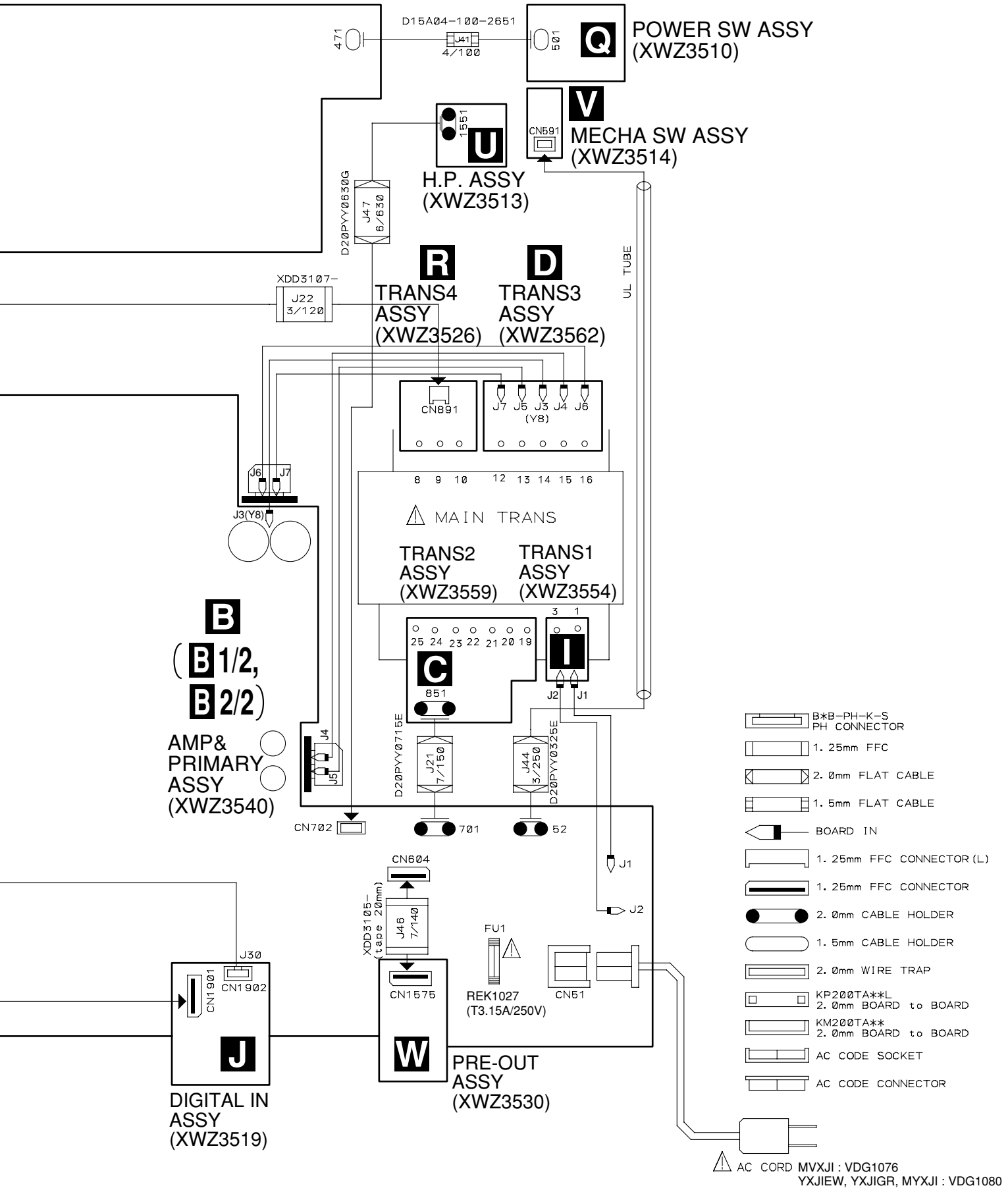




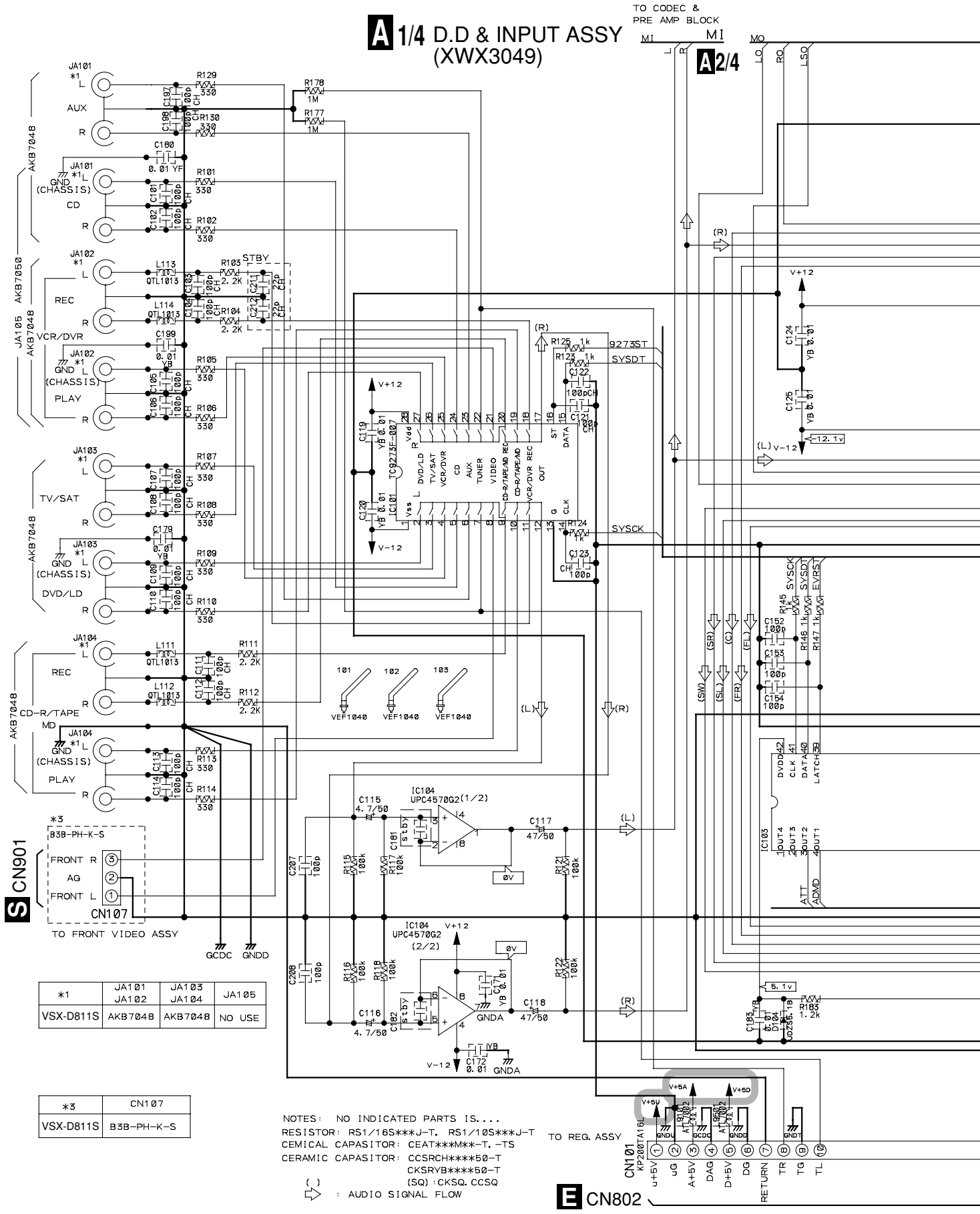

∗1 (dB) ∗2(dB) ∗3(dB)
14.1/24.1 14.7/27.3 13.8
CN1551
HEADPHONE
A. MUTE
Q1552
GND
U
CN702
POWER PACK
IC601
30dB
RY751
SP-A
FL/FR PREOUT
W
RY754
SP-B
IC602
RY753
SL/SR
SL/SR PREOUT
RY752
CENTER
CENTER PREOUT
SB
SB PREOUT
15dB ATT.
Q603
Q601
Q653
Q651
Q632
Q631
Q682
Q681
H
B
IC105
uPC2570
(PRE AMP)
CN106
CN601
BYPASS
TONE
IC103
ELECTRIC VOLUME
M62446FP
IC106
IC107
IC110
IC112
BD3812F
ELECTRIC VOLUME
∗1
∗2
∗3
IC107
CN101
CN302
SW PREOUT
Q112
Q303
E
L
VCR PLAY
TV/SAT
DVD/LD
VIDEO
CN901
CN301
IC301
(CONPONENT SEL)
NJM2296
VCR REC
MONITOR
6dB
S
V MECHA SW ASSY
S591
POWER AMP
IC601, IC602
NECK+B
NECK-B
+BVH
-BVH
+BVL
-BVL
Q701
Q702
D701
D702
FL AC
CN402
T+12V
IC805
+12V
-12V
IC801
IC802
D801–D804
D+5V
A+5V
IC803
IC804
D721–D724
CN101
U+5V
IC51
D51-D54
T51
RY51
AC IN
T1
POWER
TRANSFORMER

3.2 OVERALL WIRING CONNECTION DIAGRAM




D15A04-100-2651
J41
4/100
471
501
Q
POWER SW ASSY
(XWZ3510)
V
CN591
MECHA SW ASSY
(XWZ3514)
U
1551
H.P. ASSY
(XWZ3513)
D20PYY0630G
J47
6/630
UL TUBE
XDD3107-
J22
3/120
R
TRANS4
ASSY
(XWZ3526)
D
TRANS3
ASSY
(XWZ3562)
CN891
J7 J5 J3 J4 J6
(Y8)
J6 J7
J3(Y8)
8 9 10 12 13 14 15 16
MAIN TRANS
TRANS2
ASSY
(XWZ3559)
TRANS1
ASSY
(XWZ3554)
B
(B 1/2,
B 2/2)
AMP&
PRIMARY
ASSY
(XWZ3540)
25 24 23 22 21 20 19
C
851
3 1
I
J2 J1
J4
J5
D20PYY0715E
J21
7/150
D20PYY0325E
J44
3/250
CN702
701
52
CN604
XDD3105-
(tape 20mm)
J46
7/140
J1
J2
FU1
REK1027
(T3.15A/250V)
CN51
J30
CN1901
CN1902
J
DIGITAL IN
ASSY
(XWZ3519)
CN1575
W
PRE-OUT
ASSY
(XWZ3530)
B*B-PH-K-S
PH CONNECTOR
1. 25mm FFC
2. 0mm FLAT CABLE
1. 5mm FLAT CABLE
BOARD IN
1. 25mm FFC CONNECTOR (L)
1. 25mm FFC CONNECTOR
2. 0mm CABLE HOLDER
1. 5mm CABLE HOLDER
2. 0mm WIRE TRAP
KP200TA**L
2. 0mm BOARD to BOARD
KM200TA**
2. 0mm BOARD to BOARD
AC CODE SOCKET
AC CODE CONNECTOR
AC CORD MVXJI : VDG1076
YXJIEW, YXJIGR, MYXJI : VDG1080

3.3 D.D & INPUT (1/4) ASSY



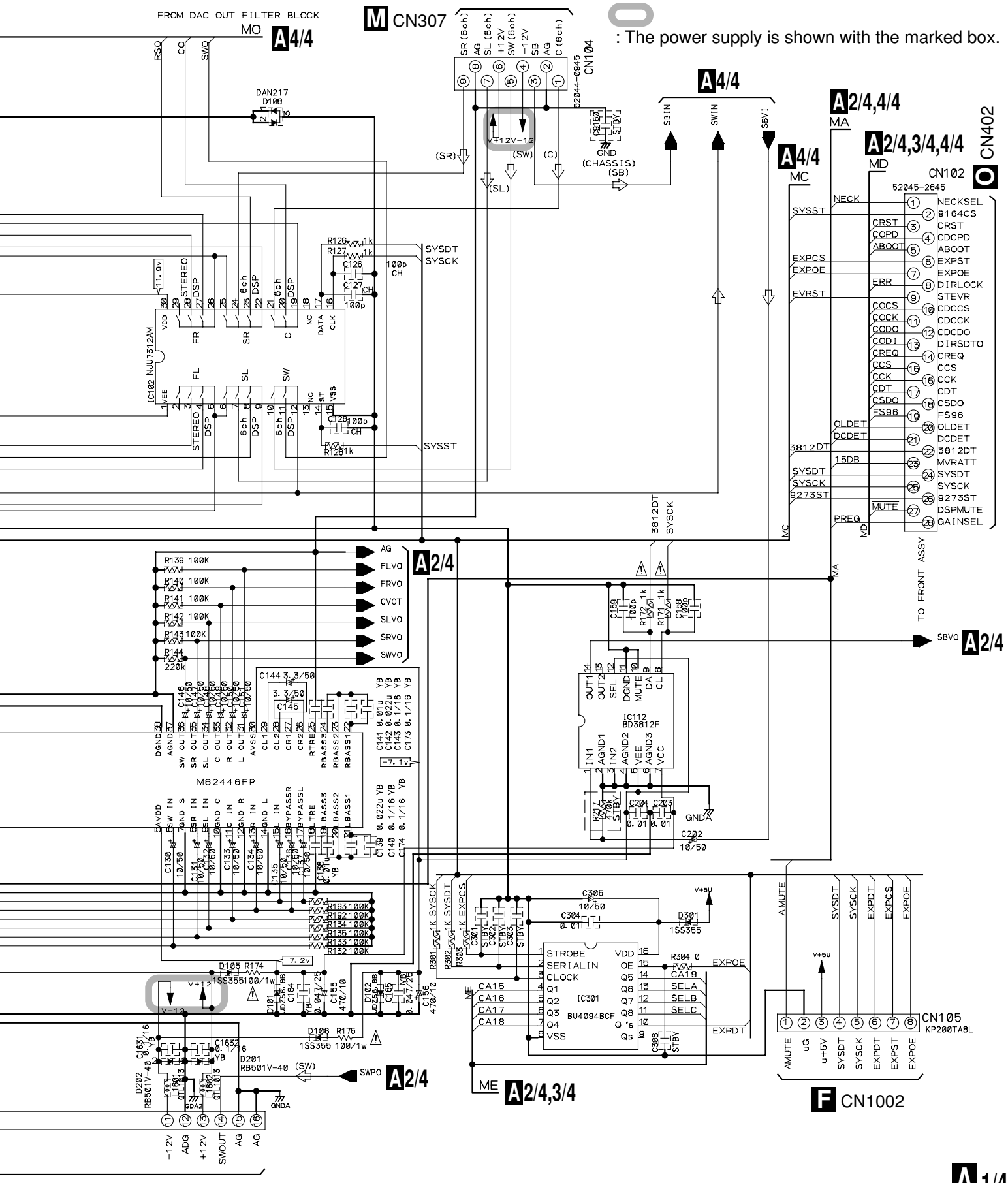
*1	JA101 JA102	JA103 JA104	JA105
VSX-D811S	AKB7048	AKB7048	NO USE

*3	CN107
VSX-D811S	B3B-PH-K-S

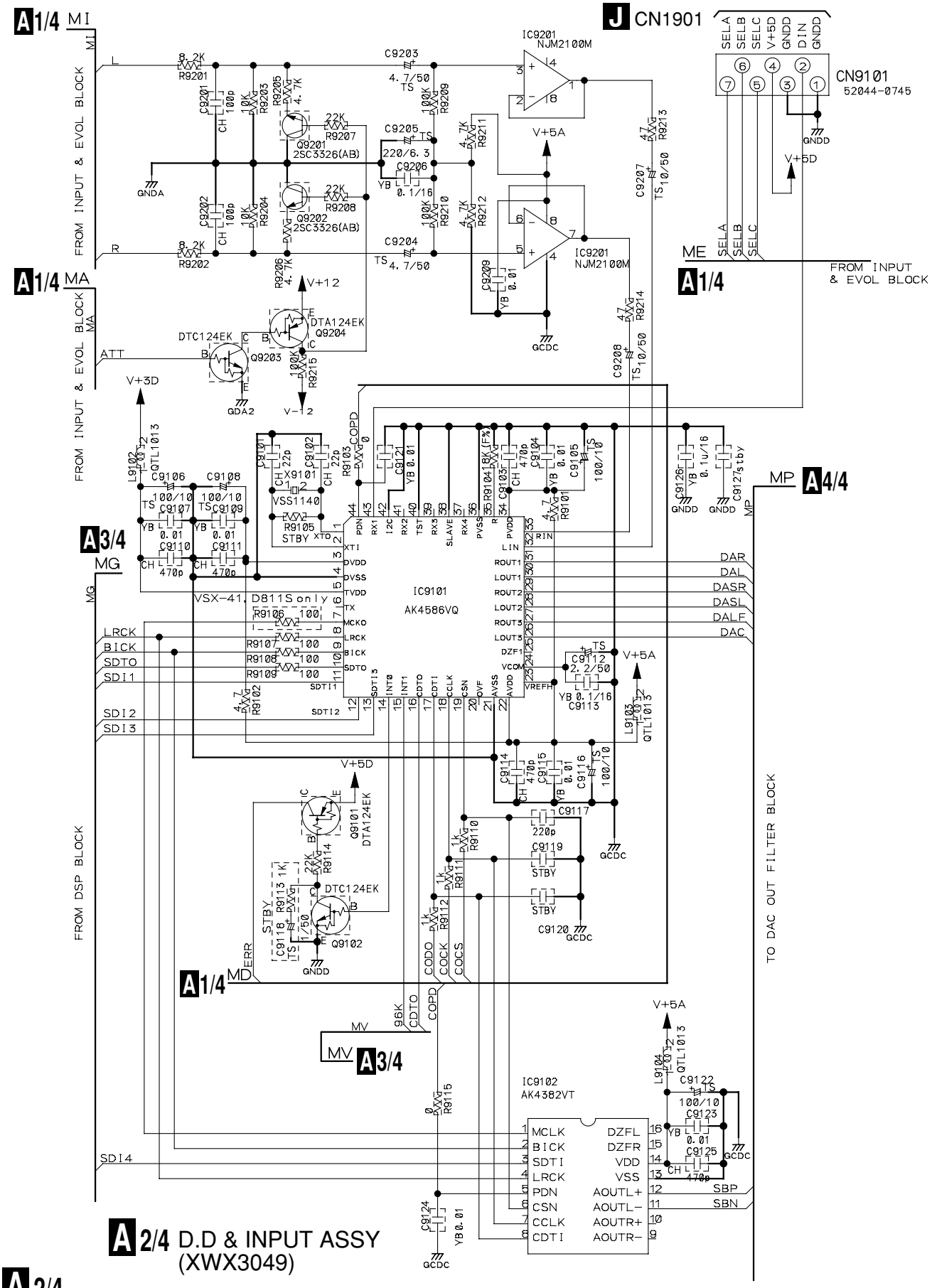
NOTES: NO INDICATED PARTS IS....
RESISTOR: RS1/16S***J-T, RS1/10S***J-T
CEMICAL CAPASITOR: CEAT***M**-T, -TS
CERAMIC CAPASITOR: CCSRCH****50-T
CKSRYB****50-T
( ) (SQ) :CKSQ. CCSQ
: AUDIO SIGNAL FLOW

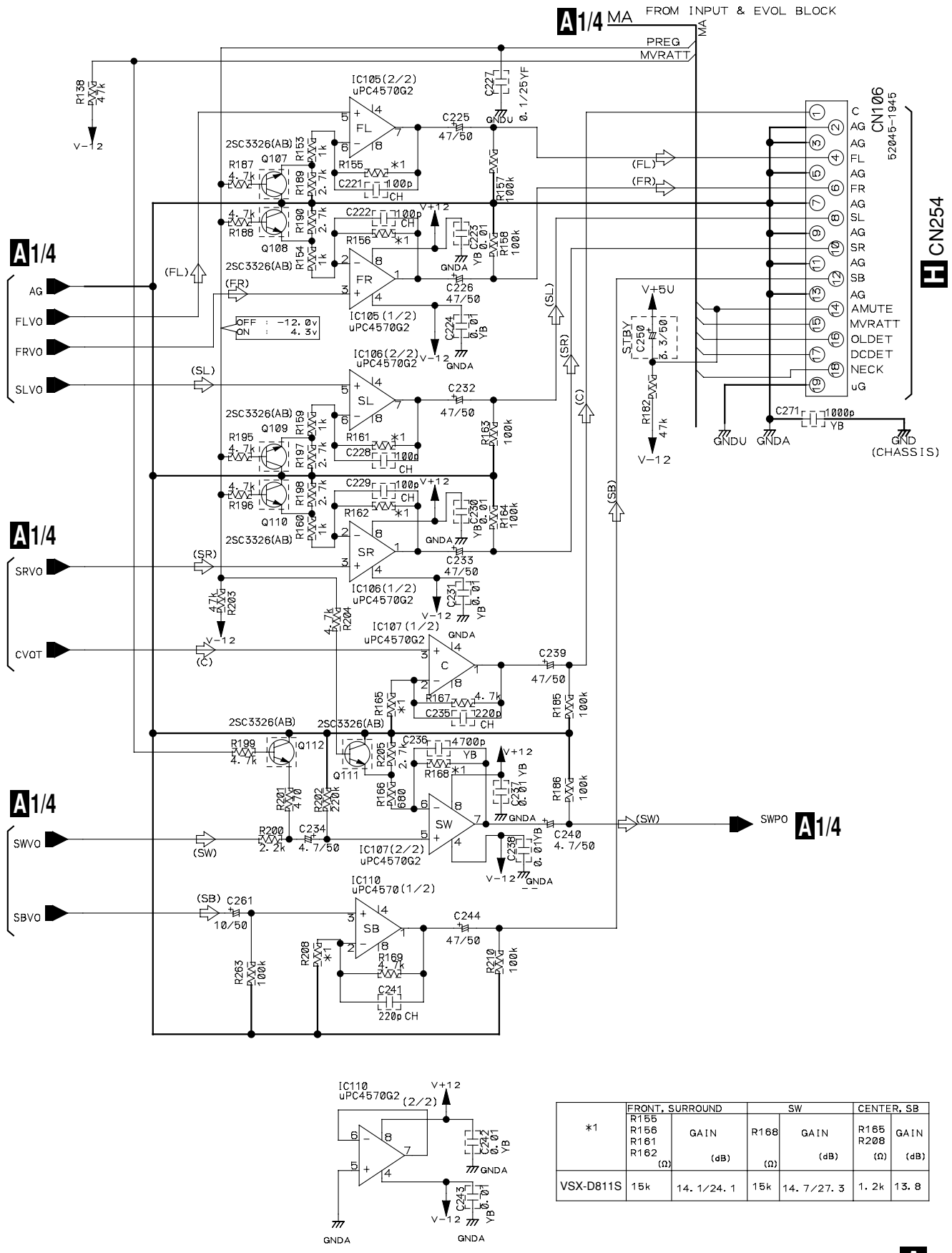
A 1/4

: The power supply is shown with the marked box.



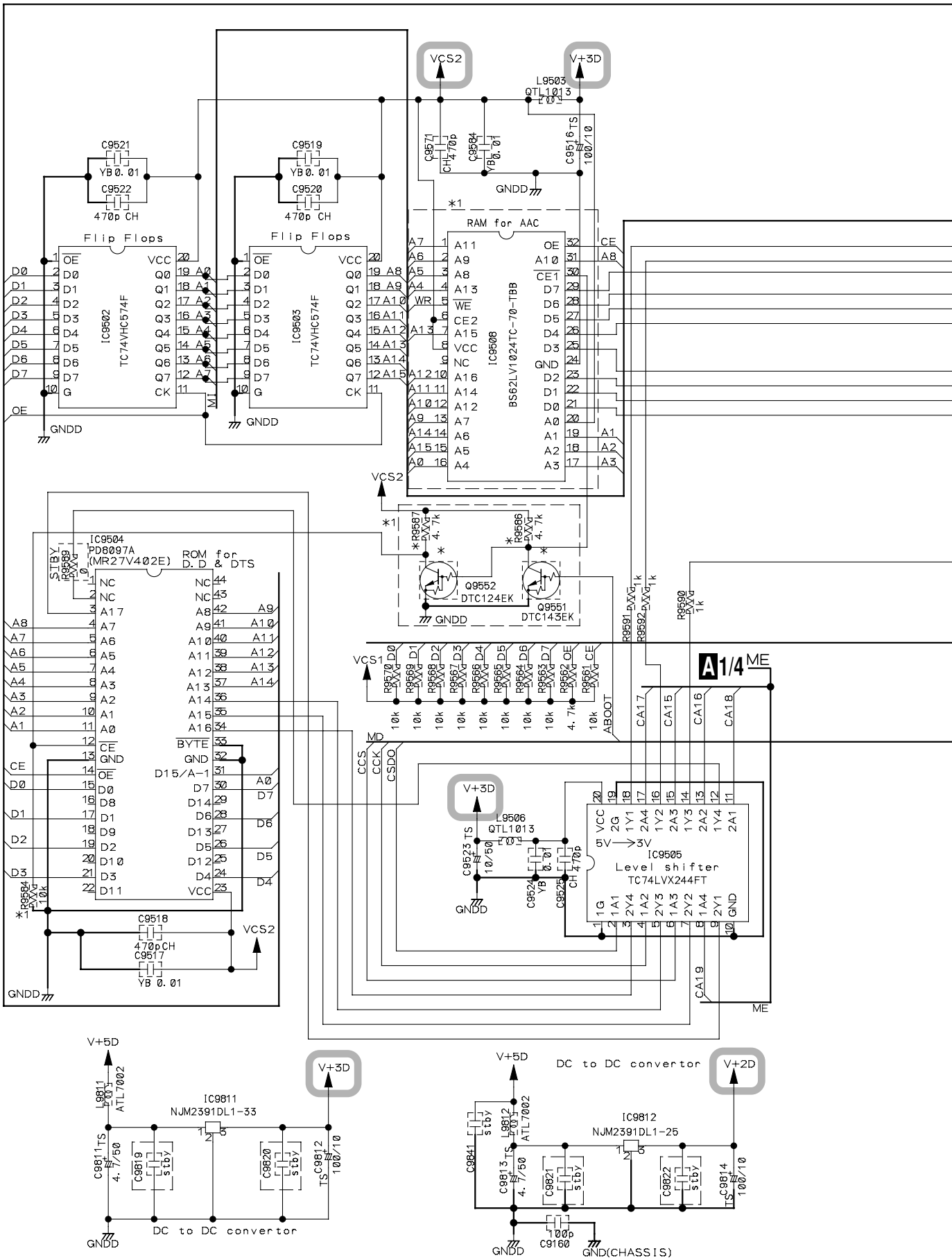
3.4 D.D & INPUT (2/4) ASSY





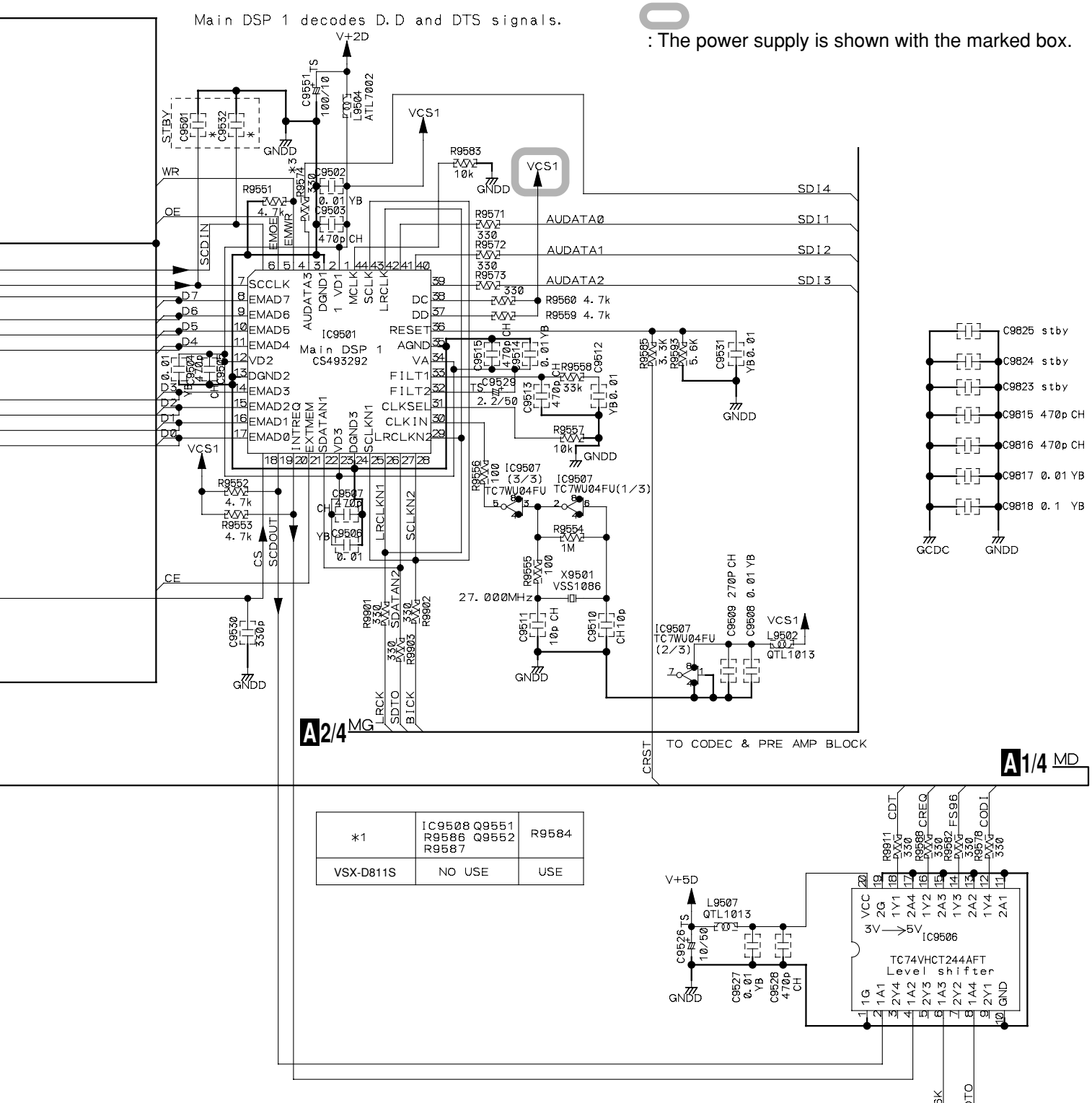
*1	FRONT, SURROUND		SW		CENTER, SB	
	R155 R156 R161 R162 (Ω)	GAIN (dB)	R168 (Ω)	GAIN (dB)	R165 R208 (Ω)	GAIN (dB)
VSX-D811S	15k	14. 1/24. 1	15k	14. 7/27. 3	1. 2k	13. 8

3.5 D.D & INPUT (3/4) ASSY



Main DSP 1 decodes D.D and DTS signals.

: The power supply is shown with the marked box.

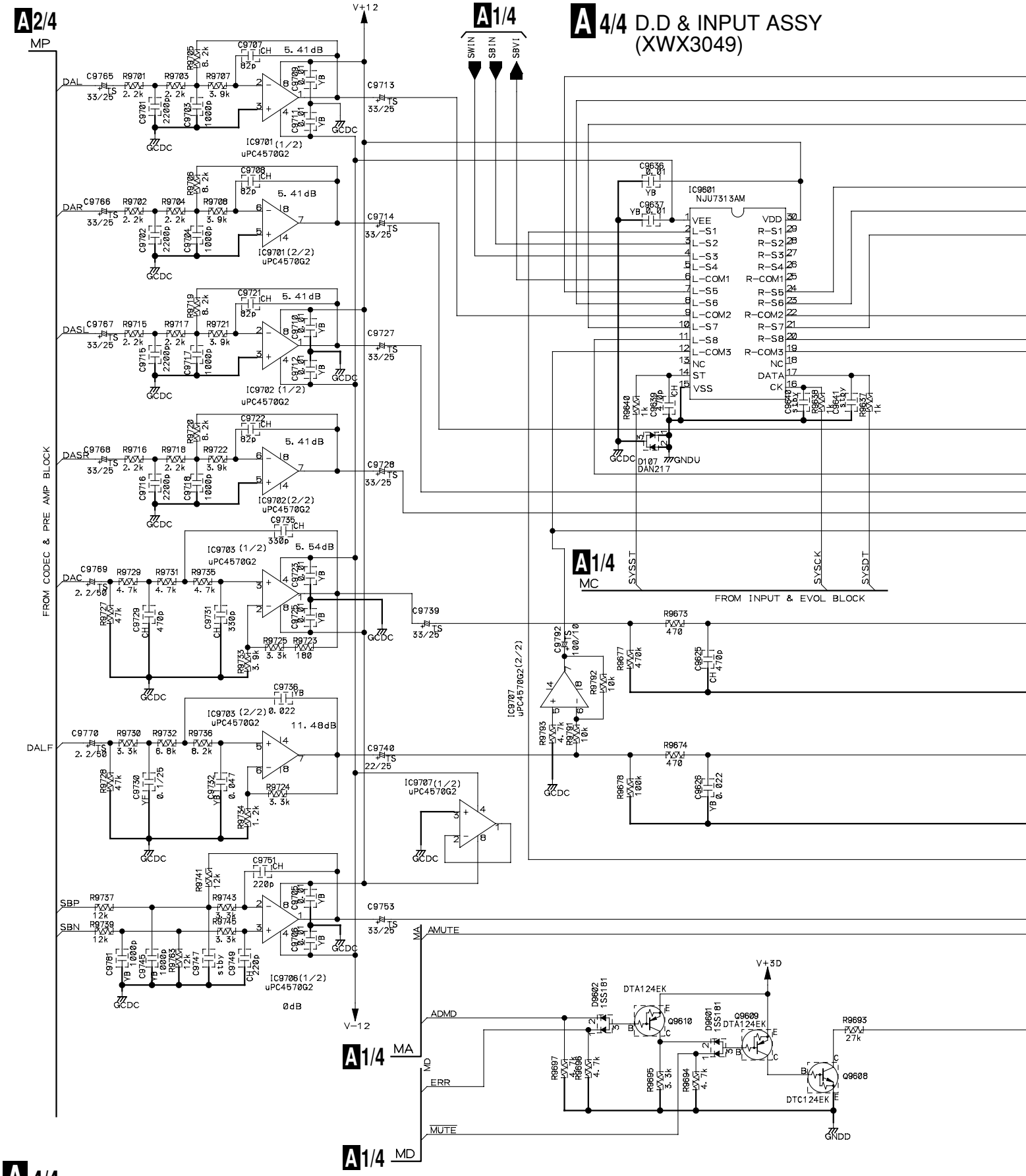


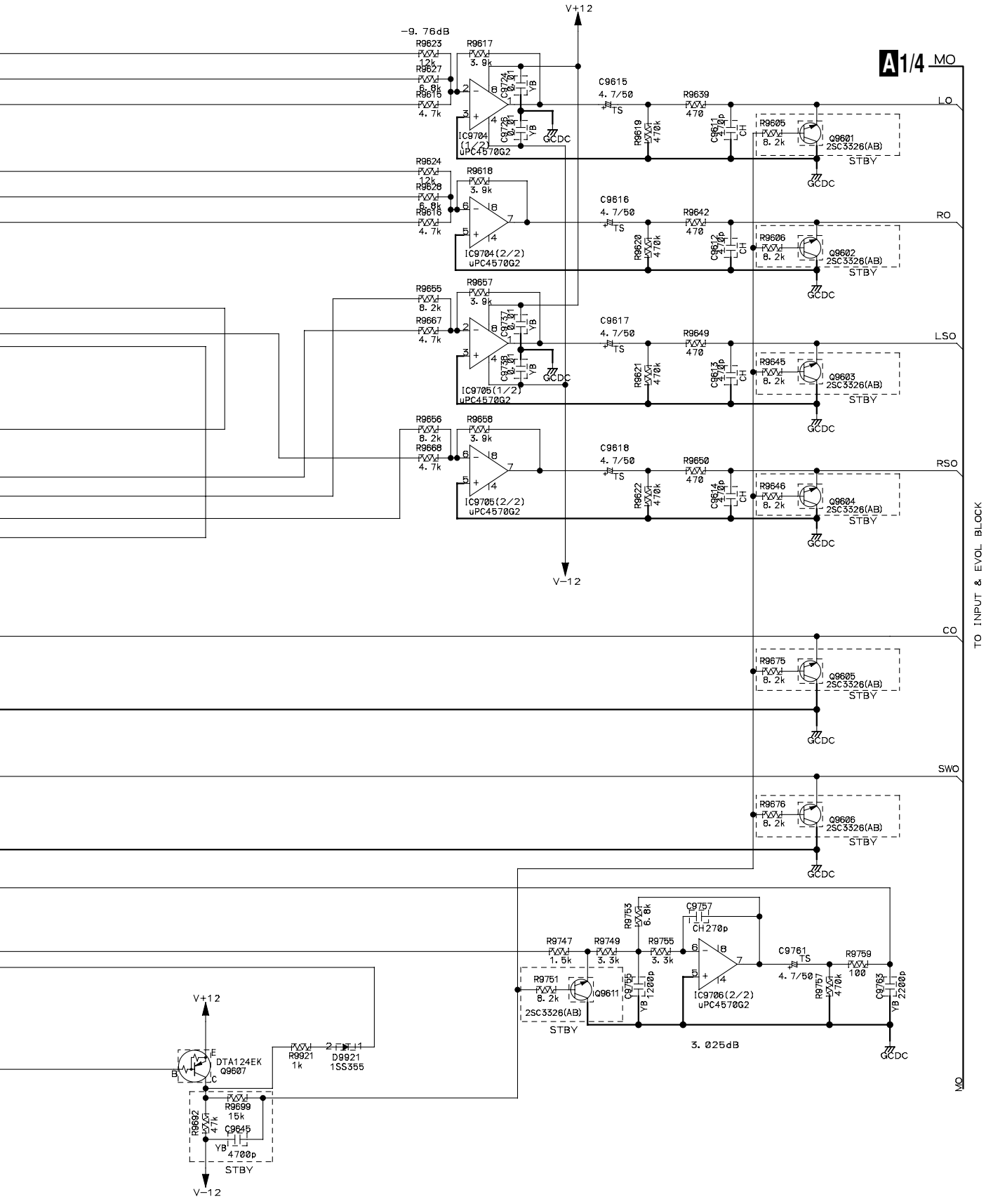
*1	IC9508 Q9551 R9586 Q9552 R9587	R9584
VSX-D811S	NO USE	USE

*3	R9574
VSX-D811S	USE

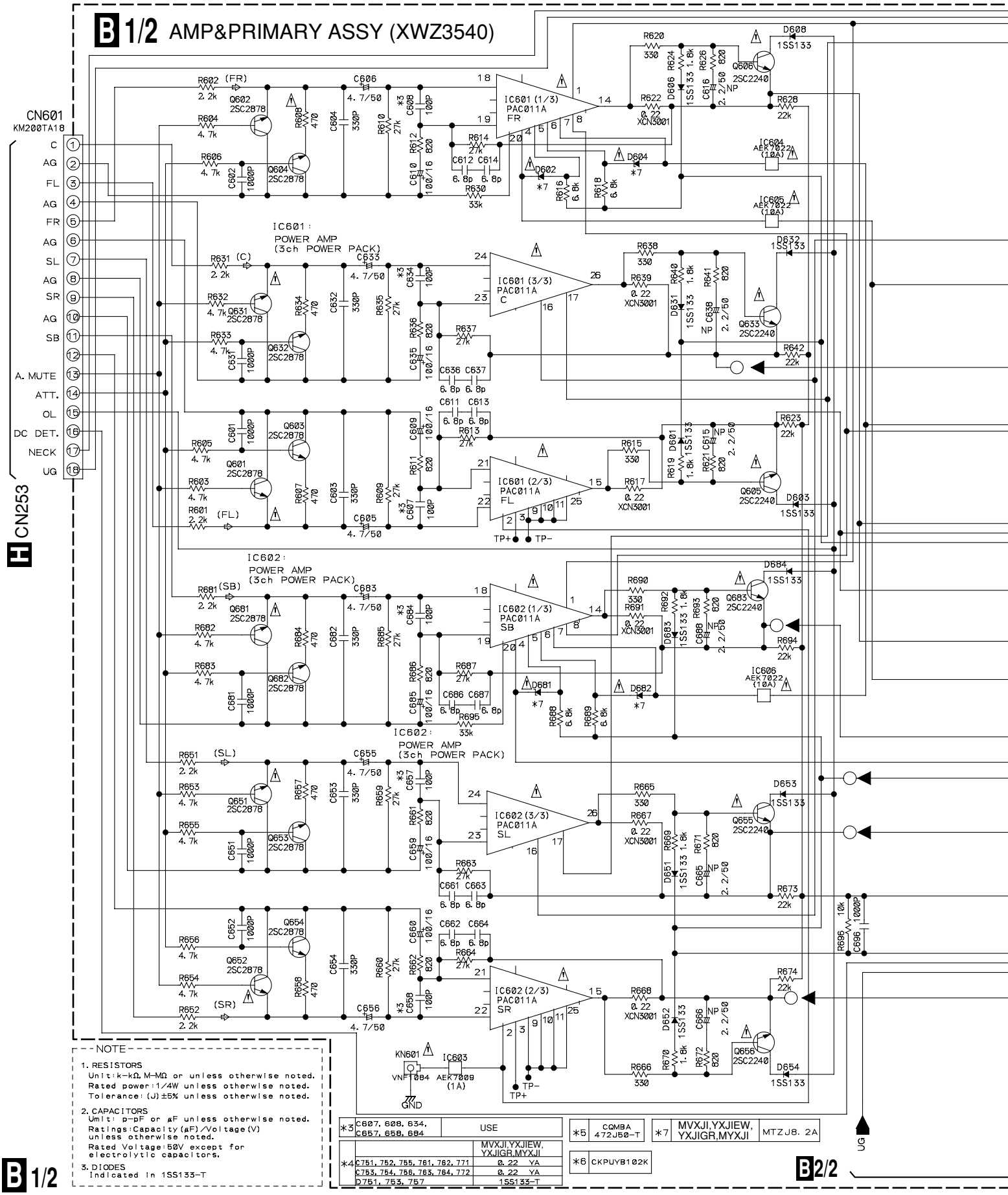
A 3/4 D.D & INPUT ASSY (XWX3049)

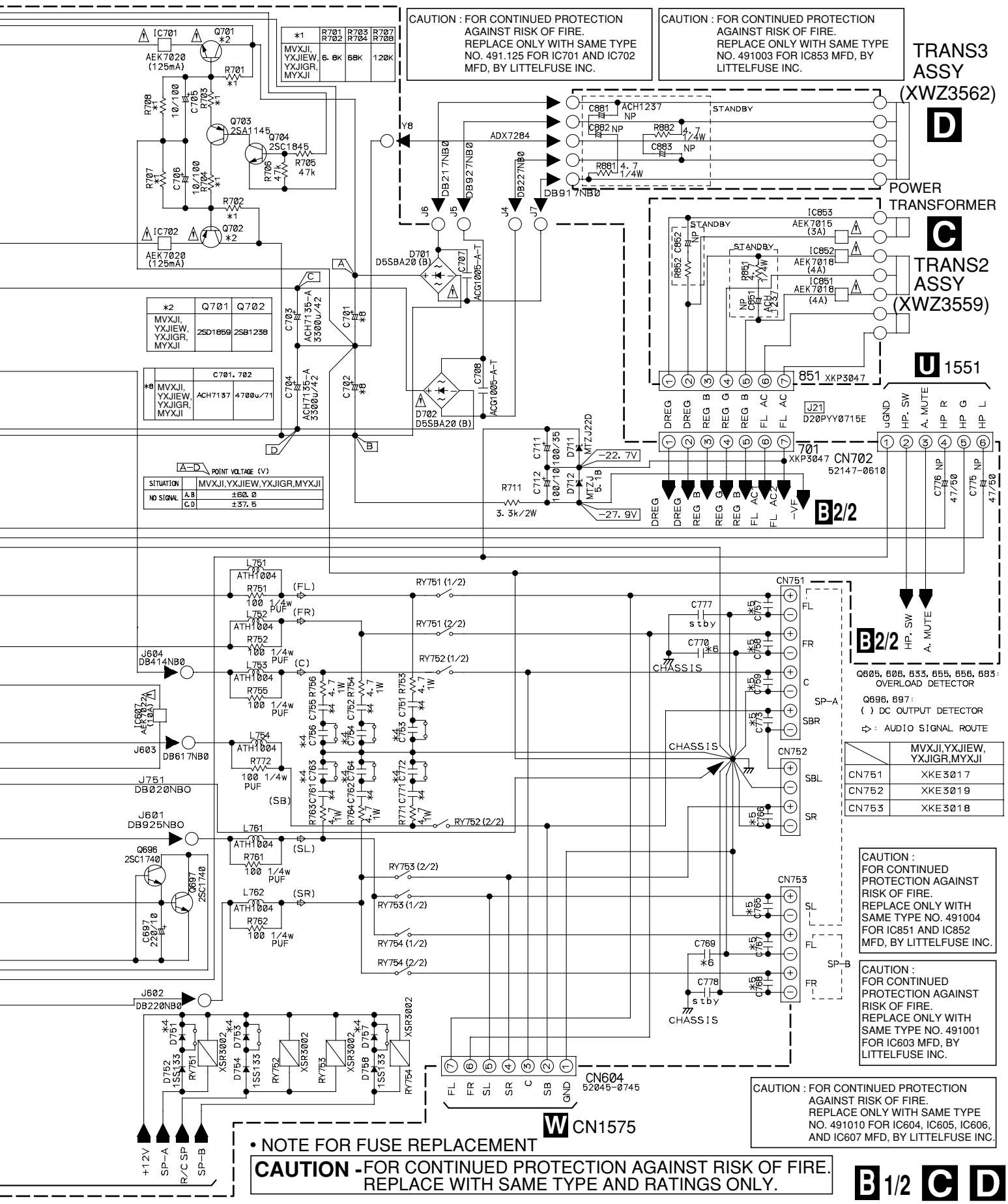
3.6 D.D & INPUT (4/4) ASSY



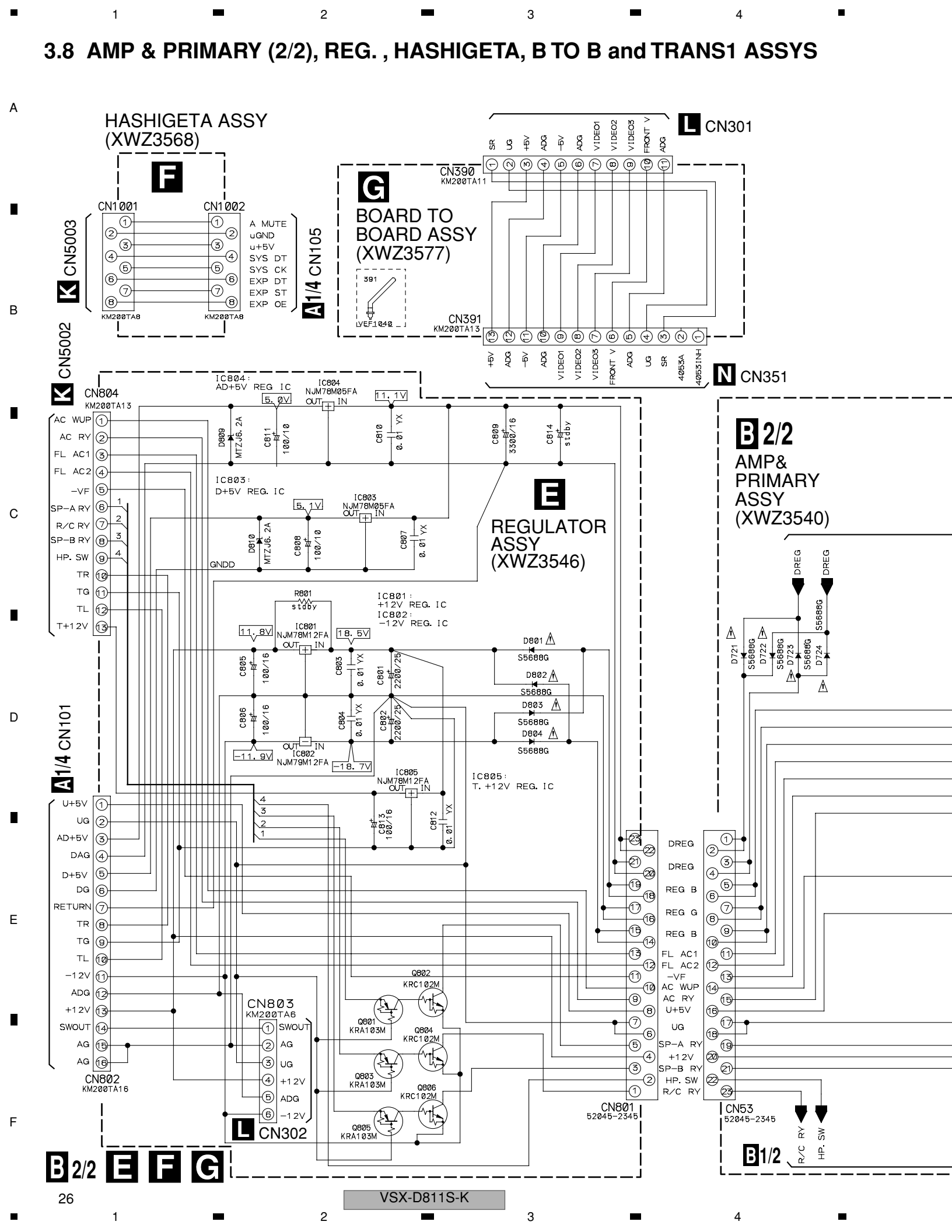

A1/4 MO
V+12
V-12
-9.76dB
R9623 12k
R9627 8.2k
R9615 4.7k
R9617 3.9k
C9724 470p CH
C9725 470p CH
YB
IC9704 (1/2) uPC4570G2
GCDC
C9615 4.7/50 TS
R9639 470
C9611 470p CH
R9619 470k
R9605 8.2k
Q9601 2SC3326(AB)
STBY
LO
R9624 12k
R9628 8.2k
R9616 4.7k
R9618 3.9k
IC9704(2/2) uPC4570G2
C9616 4.7/50 TS
R9642 470
C9612 470p CH
R9620 470k
R9606 8.2k
Q9602 2SC3326(AB)
RO
R9655 8.2k
R9667 4.7k
R9657 3.9k
C9731 470p CH
C9732 470p CH
IC9705(1/2) uPC4570G2
C9617 4.7/50 TS
R9649 470
C9613 470p CH
R9621 470k
R9645 8.2k
Q9603 2SC3326(AB)
LSO
R9656 8.2k
R9668 4.7k
R9658 3.9k
C9733 470p CH
C9734 470p CH
IC9705(2/2) uPC4570G2
C9618 4.7/50 TS
R9650 470
C9614 470p CH
R9622 470k
R9646 8.2k
Q9604 2SC3326(AB)
RSO
CO
R9675 8.2k
Q9605 2SC3326(AB)
SWO
R9676 8.2k
Q9606 2SC3326(AB)
TO INPUT & EVOL BLOCK
MO
R9747 1.5k
R9749 3.3k
R9751 8.2k
Q9611 2SC3326(AB)
R9753 6.8k
C9757 CH270p
R9755 3.3k
C9755 1200p YB
IC9706(2/2) uPC4570G2
C9761 TS 4.7/50
R9757 470k
R9759 100
C9763 2200p YB
3.025dB
V+12
DTA124EK Q9607
R9921 1k
D9921 1SS355
R9692 47k
R9699 15k
C9645 4700p YB
STBY
V-12

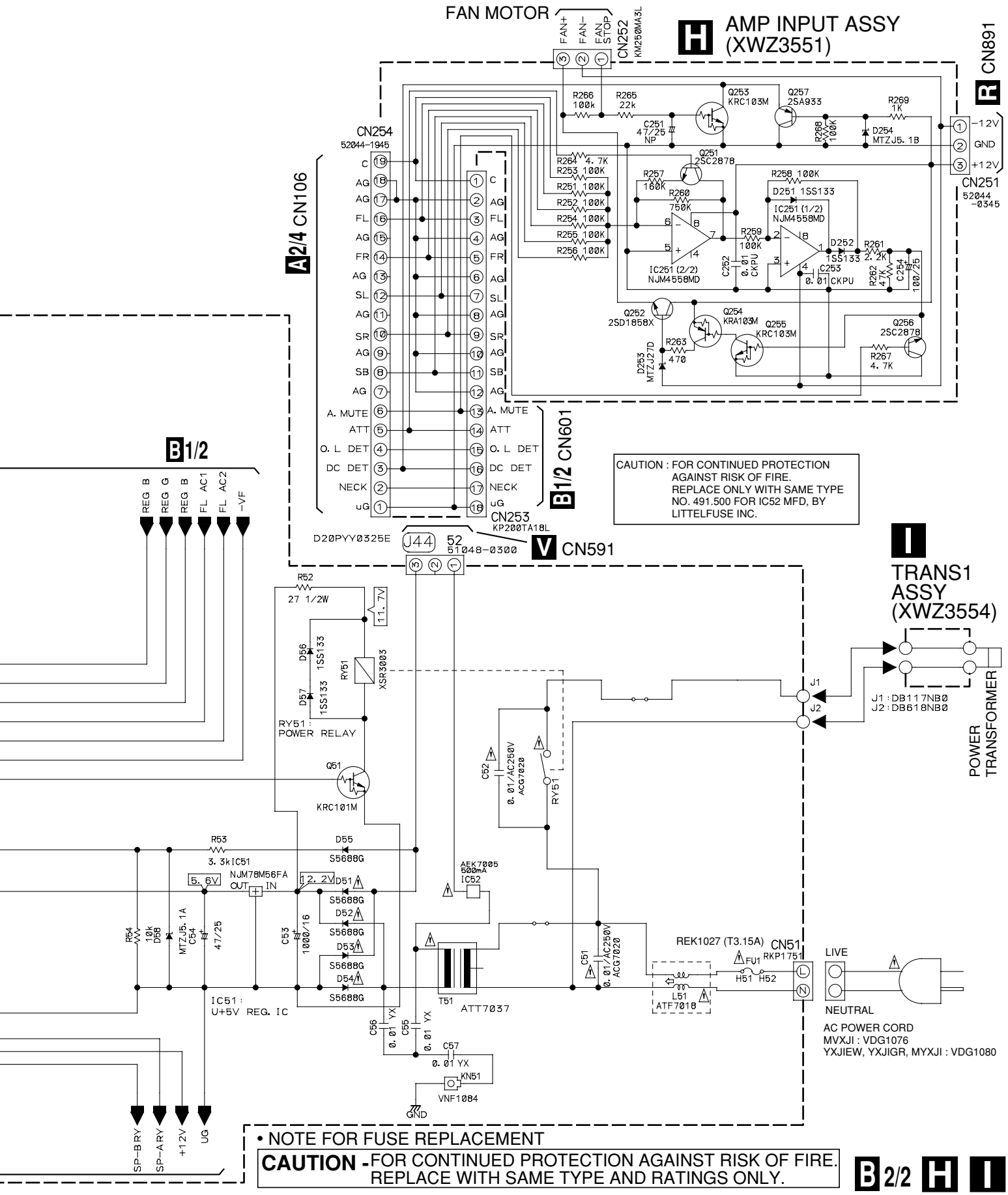
3.7 AMP & PRIMARY (1/2), TRANS2 and TRANS3 ASSYS



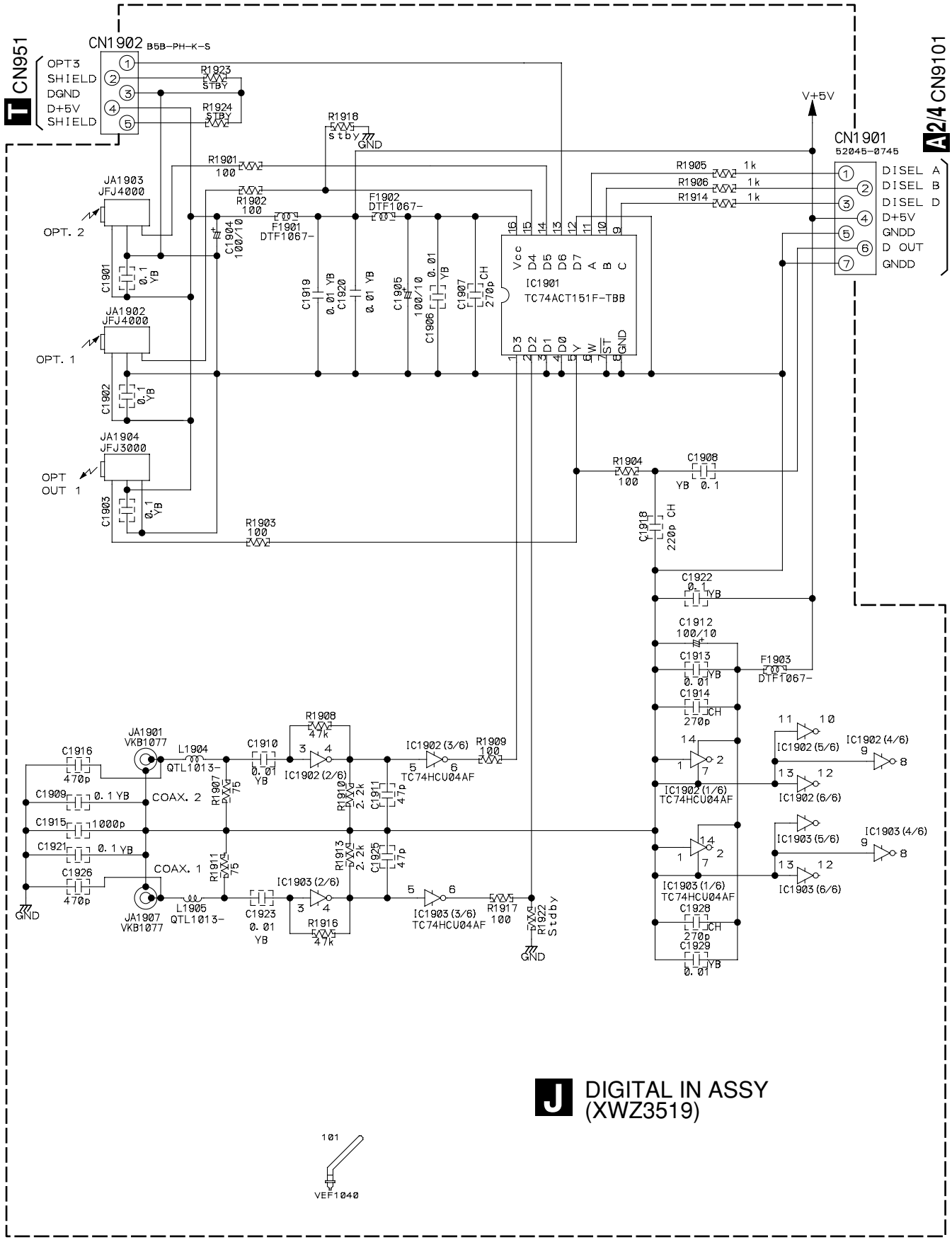

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.125 FOR IC701 AND IC702 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491003 FOR IC853 MFD, BY LITTELFUSE INC.
TRANS3 ASSY (XWZ3562)
D
POWER TRANSFORMER
C
TRANS2 ASSY (XWZ3559)
U 1551
B 2/2
W CN1575
B 1/2 C D
IC701
AEK7020 (125mA)
Q701 *2
IC702
AEK7020 (125mA)
Q702 *2
Q703 2SA1145
Q704 2SC1845
R701 *1
R702 *1
R705 47k
R706 47k
R707 *1
R708 10/100
C705
C706
10/100
R704 *1
R705 *1
*1 | R701 R702 | R703 R704 | R707 R708
MVXJI, YXJIEW, YXJIGR, MYXJI | 6.8K | 68K | 120K
*2 | Q701 | Q702
MVXJI, YXJIEW, YXJIGR, MYXJI | 2SD1859 | 2SB1238
*8 | C701, 702
MVXJI, YXJIEW, YXJIGR, MYXJI | ACH7137 | 4700u/71
A–D POINT VOLTAGE (V)
SITUATION | MVXJI,YXJIEW,YXJIGR,MYXJI
NO SIGNAL | A,B | ±60.0
C,D | ±37.5
Y8
ADX7284
DB217NB0
DB927NB0
DB227NB0
DB917NB0
J6
J5
J4
J7
C881 ACH1237 NP
C882 NP
C883 NP
R882 4.7 1/4W
R881 4.7 1/4W
STANDBY
D701 D5SBA20 (B)
D702 D5SBA20 (B)
C707 ACG1005-A-T
C708 ACG1005-A-T
C703 ACH7135-A 3300u/42
C704 ACH7135-A 3300u/42
C701 *8
C702 *8
IC853 AEK7015 (3A)
IC852 AEK7018 (4A)
IC851 AEK7018 (4A)
R852 C852
R851 4.7 1/4W
C851 NP
R711 3.3k/2W
C711 100/35
C712 100/10
D711 MTZJ22D
D712 MTZJ 5.1B
−22.7V
−27.9V
851 XKP3047
J21 D20PYY0715E
701 XKP3047
CN702 52147-0610
DREG
REG B
REG G
FL AC
−VF
GND
HP. SW
A. MUTE
HP R
HP G
HP L
C776 NP 47/50
C775 NP 47/50
L751 ATH1004
L752 ATH1004
L753 ATH1004
L754 ATH1004
L761 ATH1004
L762 ATH1004
R751 100 1/4w PUF
R752 100 1/4w PUF
R755 100 1/4w PUF
R772 100 1/4w PUF
R761 100 1/4w PUF
R762 100 1/4w PUF
(FL)
(FR)
(C)
(SB)
(SL)
(SR)
RY751 (1/2)
RY751 (2/2)
RY752 (1/2)
RY752 (2/2)
RY753 (2/2)
RY753 (1/2)
RY754 (1/2)
RY754 (2/2)
R755 R756 R754 R752 R751 R753 4.7 1W *4
R763 R764 R762 R761 R771 R772 4.7 1W *4
C755 C756 C754 C752 C751 C753 *4
C763 C764 C762 C761 C771 C772 *4
J604 DB414NB0
J603 DB617NB0
J751 DB020NBO
J601 DB925NBO
J602 DB220NB0
IC607 AEK7022 (10A)
Q696 2SC1740
Q697 2SC1740
C697 220/10
CN751
CN752
CN753
FL
FR
C
SBR
SBL
SR
SL
SP−A
SP−B
C777 stby *6
C770 *6
C769 *6
C778 stby
CHASSIS
C757 C758 C759 C773 C766 C765 C767 C768 *5
Q605, 606, 633, 655, 656, 685: OVERLOAD DETECTOR
Q696, 697: ( ) DC OUTPUT DETECTOR
: AUDIO SIGNAL ROUTE
MVXJI,YXJIEW, YXJIGR,MYXJI
CN751 XKE3017
CN752 XKE3019
CN753 XKE3018
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491004 FOR IC851 AND IC852 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491001 FOR IC603 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491010 FOR IC604, IC605, IC606, AND IC607 MFD, BY LITTELFUSE INC.
D752 1SS133
D753 1SS133
D754 1SS133
D757 1SS133
D758 1SS133
RY751
RY752
RY753
RY754
XSR3002
CN604 52045-0745
FL FR SL SR C SB GND
+12V
SP−A
R/C SP
SP−B
• NOTE FOR FUSE REPLACEMENT
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

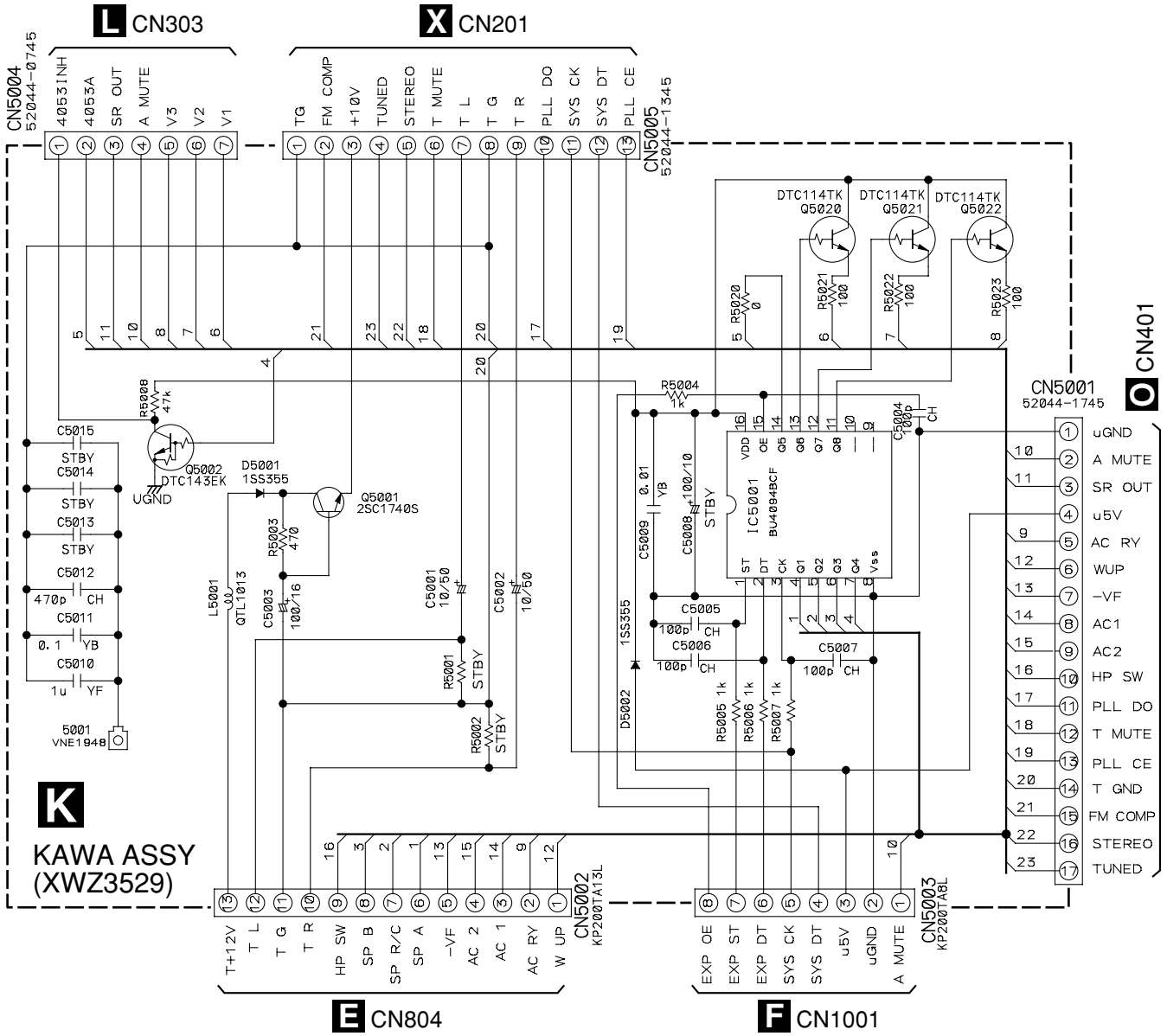
3.8 AMP & PRIMARY (2/2), REG. , HASHIGETA, B TO B and TRANS1 ASSYS



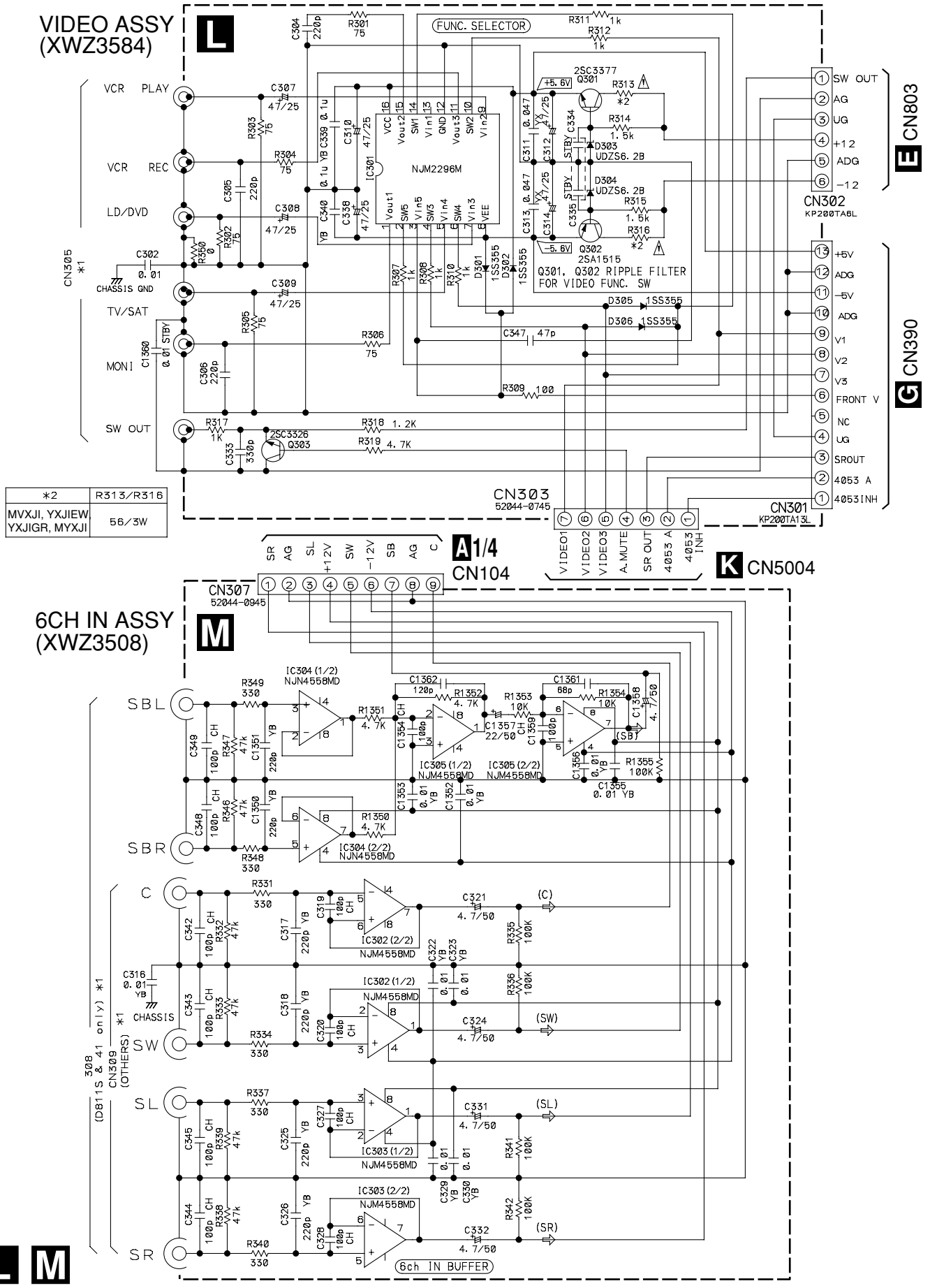

FAN MOTOR
FAN+
FAN−
FAN STOP
CN252
KM250MA3L
H AMP INPUT ASSY (XWZ3551)
R CN891
CN254
52044-1945
A2/4 CN106
B1/2 CN601
CN253
KP200TA18L
D20PYY0325E
J44
52
51048-0300
V CN591
B1/2
REG B
REG G
REG B
FL AC1
FL AC2
−VF
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.500 FOR IC52 MFD, BY LITTELFUSE INC.
I TRANS1 ASSY (XWZ3554)
J1 : DB117NB0
J2 : DB618NB0
POWER TRANSFORMER
RY51 : POWER RELAY
XSR3003
KRC101M
IC51 : U+5V REG. IC
NJM78M56FA
ATT7037
AEK7005
IC52
REK1027 (T3.15A)
CN51
RKP1751
FU1
H51 H52
L51
ATF7018
LIVE
NEUTRAL
AC POWER CORD
MVXJI : VDG1076
YXJIEW, YXJIGR, MYXJI : VDG1080
SP−B RY
SP−A RY
+12V
UG
GND
KN51
VNF1084
• NOTE FOR FUSE REPLACEMENT
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.
B2/2 H I

3.9 DIGITAL IN and KAWA ASSYS




L CN303
X CN201
CN5004
52044-0745
CN5005
52044-1345
CN5001
52044-1745
O CN401
CN5002
KP200TA13L
CN5003
KP200TA8L
E CN804
F CN1001
K
KAWA ASSY
(XWZ3529)
IC5001
BU4094BCF
Q5020
Q5021
Q5022
DTC114TK
Q5002
DTC143EK
Q5001
2SC1740S
D5001
1SS355
D5002
1SS355
5001
VNE1948
L5001
QTL1013

3.10 VIDEO, 6CH IN and S. VIDEO ASSYS



*2	R313/R316
MVXJI, YXJIEW YXJIGR, MYXJI	56/3W

NOTE

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/10W unless otherwise noted.
   Tolerance: (J)±5% unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
   Rated Voltage: 50V expect for electrolytic capacitors.
3. DIODES
   Indicated in 1SS355-TRB

NJM2296D control port status

SW1	SW2	SW3	SW4	SW5	Vout1	Vout2	Vout3
1	0	(1)	0	1	Vin2	Vin2	mute
1	1	(1)	0	1	Vin3	Vin3	Vin3
1	1	0	1	1	Vin4	Vin4	Vin4
1	1	1	1	1	Vin5	Vin5	Vin5
0	0	(0)	(0)	0	mute	mute	mute

VIN 2. VCR
VIN 3. DVD/LD
VIN 4. TV/SAT
VIN 5. FRONT
Vout1. MON out
Vout2. MR out
Vout3. VCR out

S CN901
CN354 B5B-PH-K-S
ADG FRONT V FRONT Y ADG FRONT C
J29 XDX3012

N S. VIDEO ASSY (XWZ3522)

G CN391
SROUT UG +5V ADG -5V ADG V1 V2 V3 FRONT V ADG
CN351 KP200TA11L

+5.6V -5.6V

SR OUT JA351 RKN1004
C377 YX stby V
C378 0.01 YX
CHASSIS GND

C351 YB 0.1u
C362 47/25
R385 0
R368 1k
R367 1k
R371 75
R384
R383 0
0
C365 220p
C364 220p
CN352/ JA352 (1/3) *1 MON OUT

IC352 NJM2296M
VCC Vout2 SW1 Vin1 GND Vout3 SW2 Vin2
Vout1 SW5 Vin5 SW3 Vin4 SW4 Vin3 VEE
R386 100
C361 47/25
C354 0.1u YB
R373 75
R365 1k
R364 1k
C375 47p
R363 1k
R386 0
R382
R381 0
0
C369 220p
C368 220p
CN352/ JA352 (2/3) *1 VCR OUT
R370 75
R369 75
C372 0.01
CHASSIS GND

S-Y FUNC. SELECTOR
S-C FUNC. SELECTOR

LD/DVD CN353 (1/2) *1
C353 0.1
C352 47/25
R351 75
R352 75

TV/SAT CN353 (2/2) *1
C356 0.1
C355 47/25
R353 75
R354 75

C373 0.01
CHASSIS GND
C358 47/25
C359 0.1
R355 75
R356 75

VCR1 CN352/ JA352 (3/3) *1

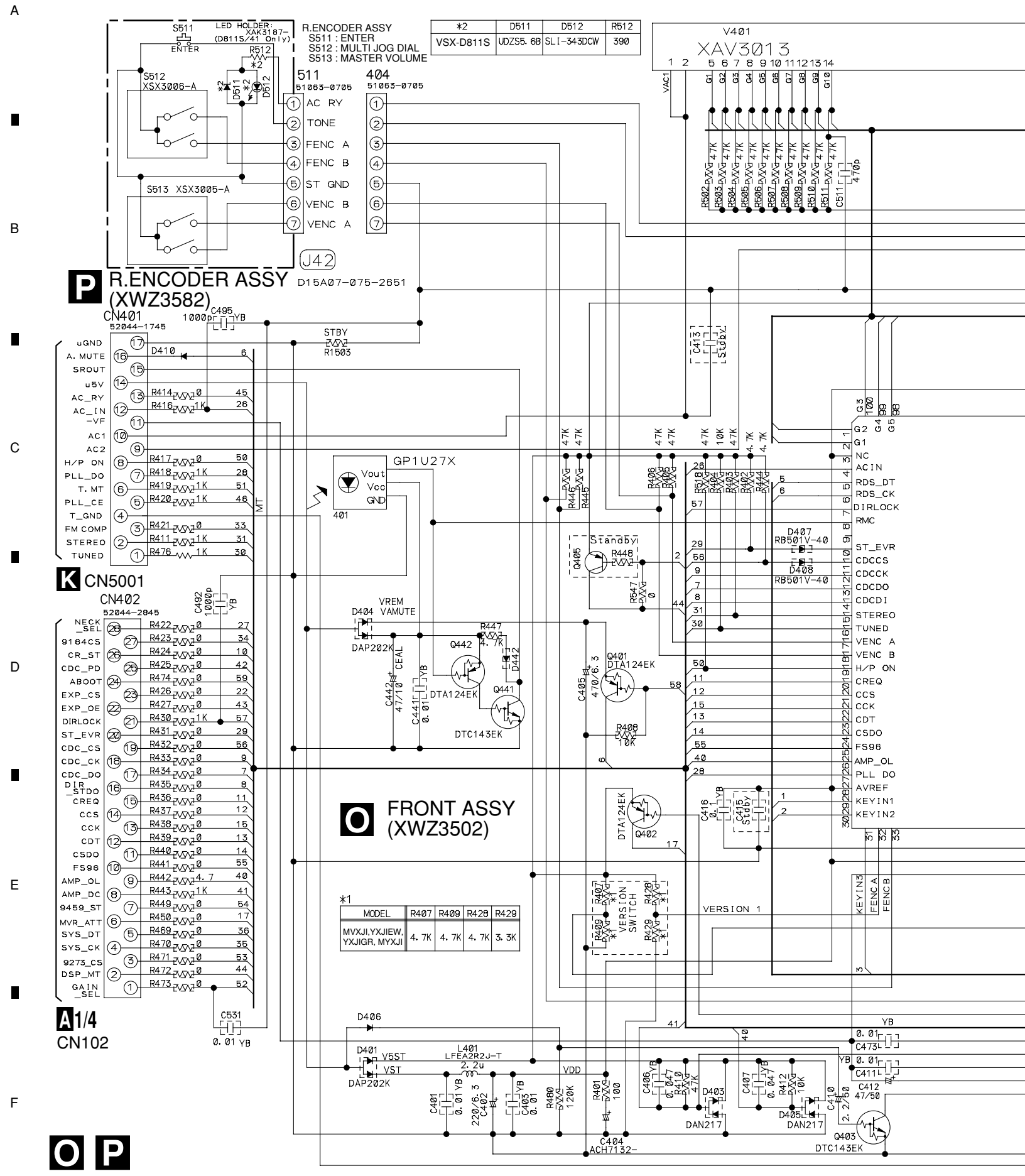
C357 YB 0.1u
C363 47/25
R361 1k
R362 1k
R372 75
D354 1SS355
D353 1SS355
D352 1SS355
D351 1SS355

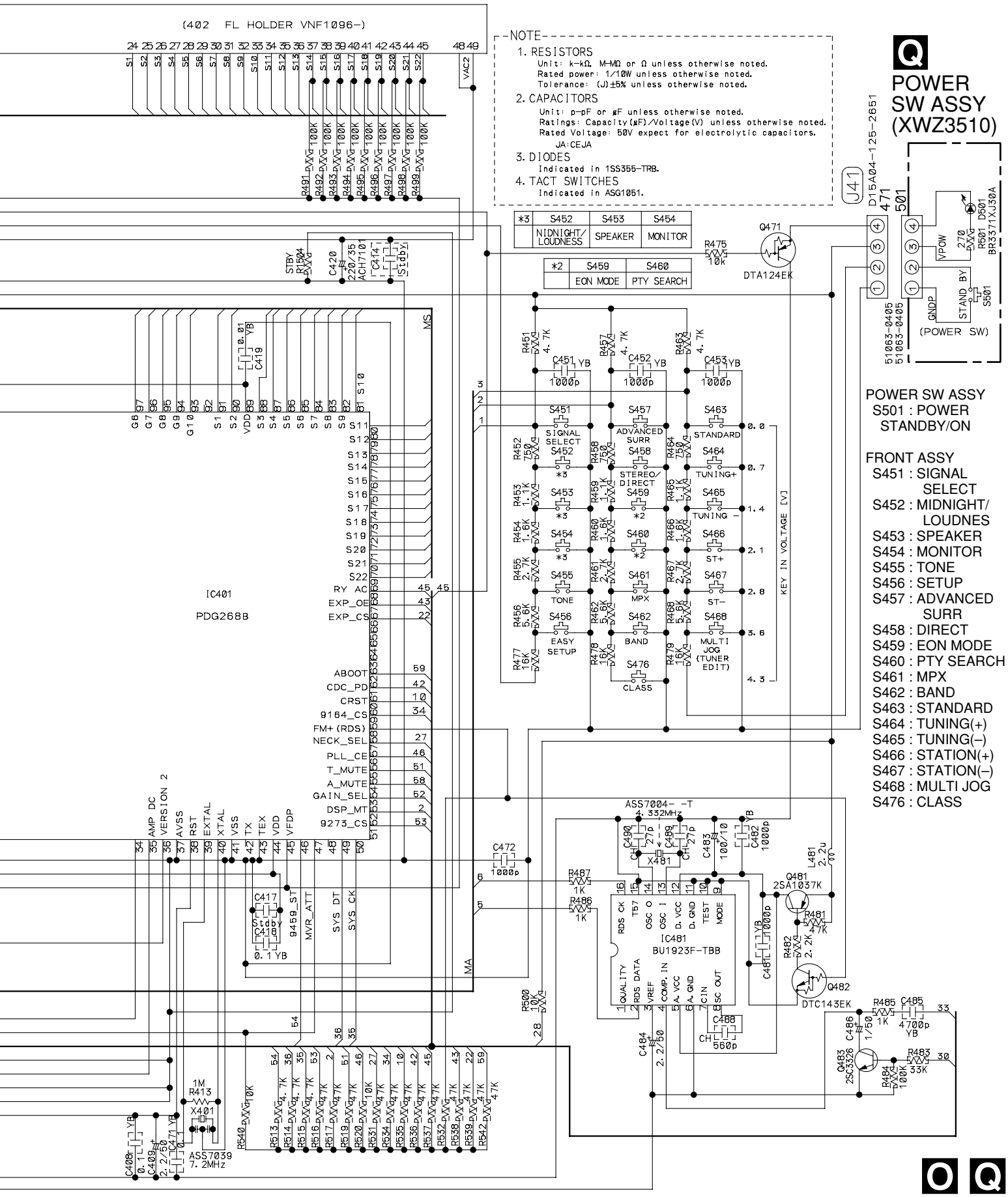
IC351 NJM2296M
VCC Vout2 SW1 Vin1 GND Vout3 SW2 Vin2
Vout1 SW5 Vin5 SW3 Vin4 SW4 Vin3 VEE
C367 0.1u YB
C366 47/25
C370 220p
C371 220p
R374 75
R357 1k
R359 100
R360 1k
R358 1k
C376 47p

*1	CN305	308	CN352	JA352	CN353	CN309
VSX-D811S	AKB7123	AKB7089	AKP7043	NO USE	AKP7020	NO USE

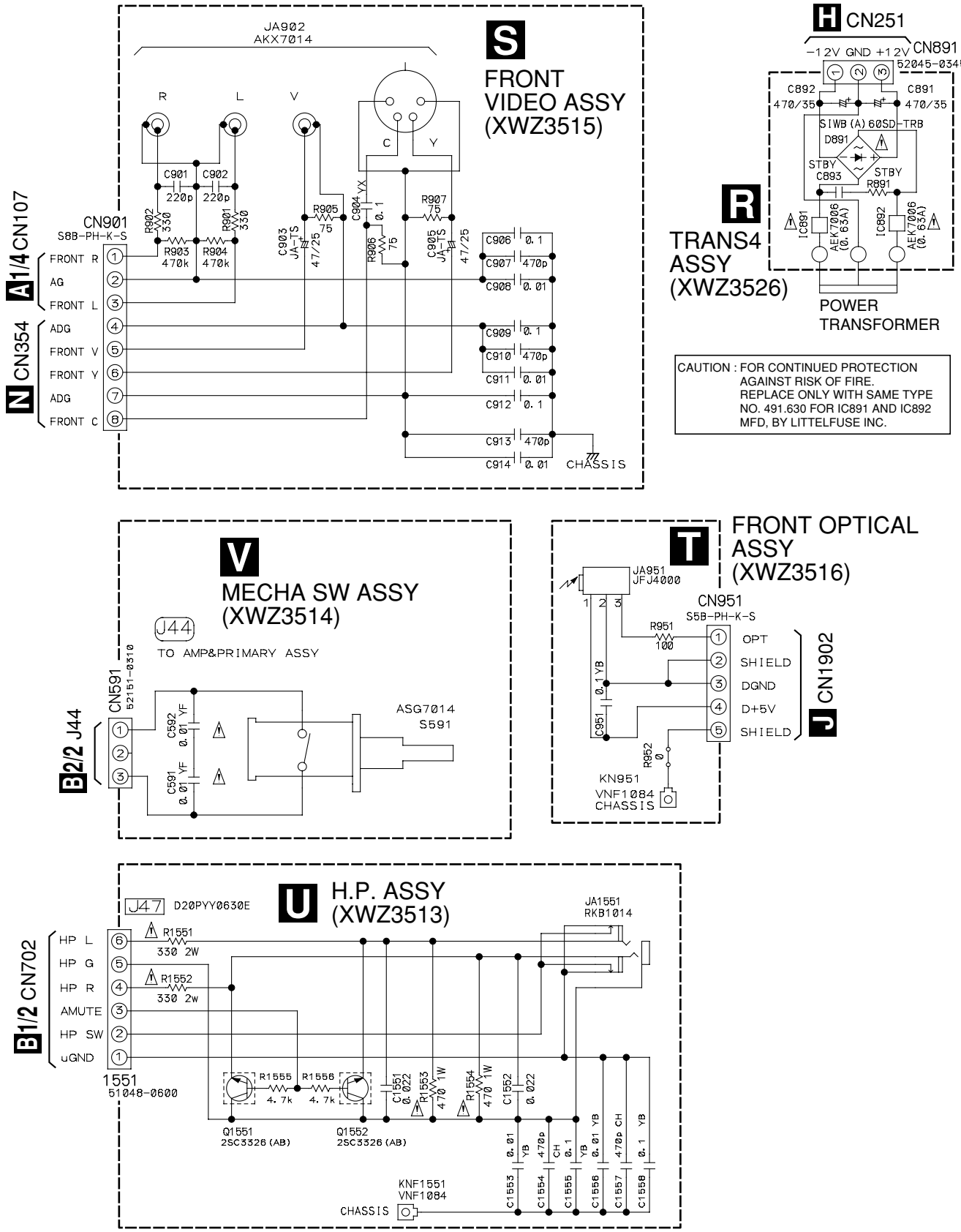
VIDEO SIGNAL FLOW
AUDIO SIGNAL FLOW

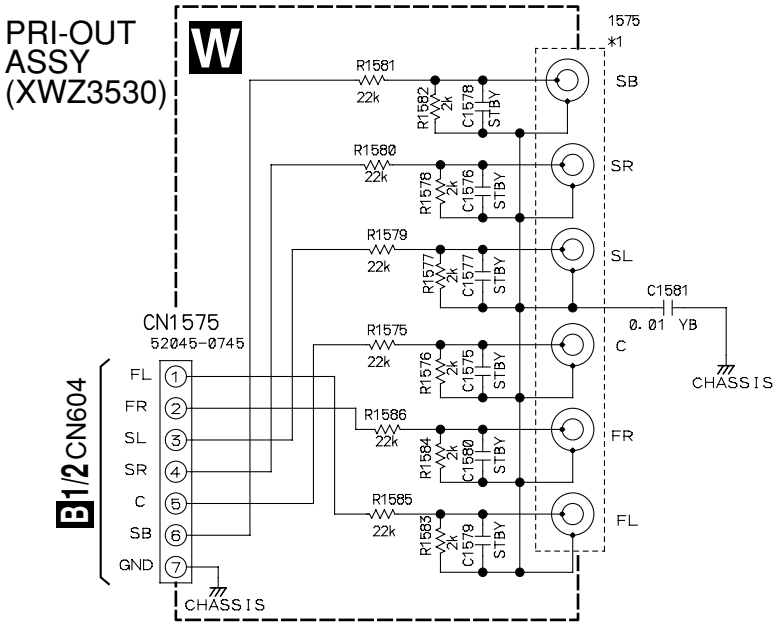
3.11 FRONT, R. ENCODER and POWER SW ASSYS




POWER
SW ASSY
(XWZ3510)
POWER SW ASSY
S501 : POWER STANDBY/ON
FRONT ASSY
S451 : SIGNAL SELECT
S452 : MIDNIGHT/ LOUDNES
S453 : SPEAKER
S454 : MONITOR
S455 : TONE
S456 : SETUP
S457 : ADVANCED SURR
S458 : DIRECT
S459 : EON MODE
S460 : PTY SEARCH
S461 : MPX
S462 : BAND
S463 : STANDARD
S464 : TUNING(+)
S465 : TUNING(–)
S466 : STATION(+)
S467 : STATION(–)
S468 : MULTI JOG
S476 : CLASS
NOTE
1. RESISTORS
2. CAPACITORS
3. DIODES
4. TACT SWITCHES
IC401
PDG268B
IC481
BU1923F-TBB
ASS7004- -T
4.332MHz
ASS7039
7.2MHz
KEY IN VOLTAGE [V]
(POWER SW)

3.12 TRANS4, F. VIDEO, F. OPTICAL, H. P. , M. SW and PRI-OUT ASSYS

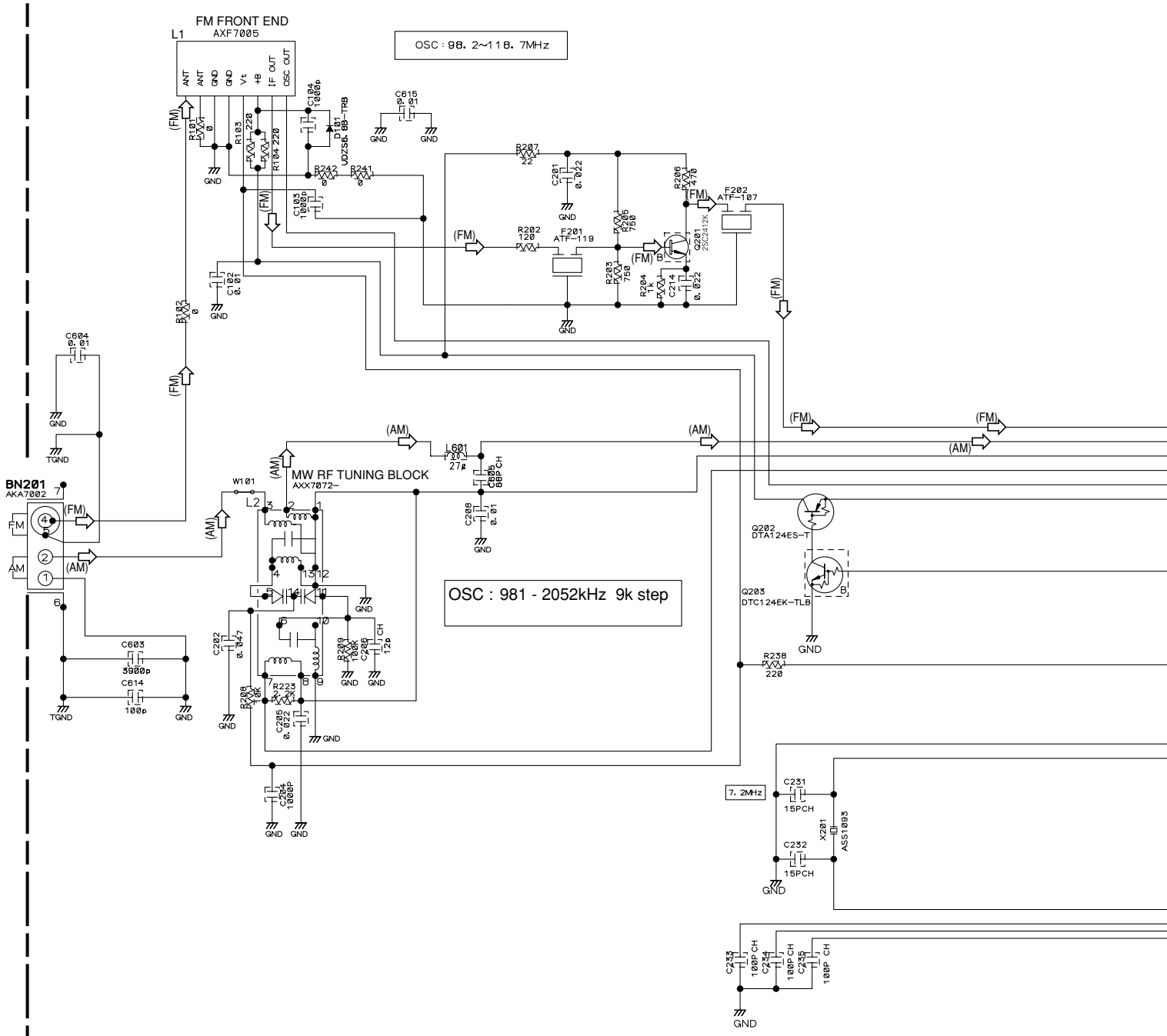




*1	1575
VSX-D811S	AKB7089

3.13 FM/AM TUNER MODULE

X FM/AM TUNER MODULE (AXQ7232)

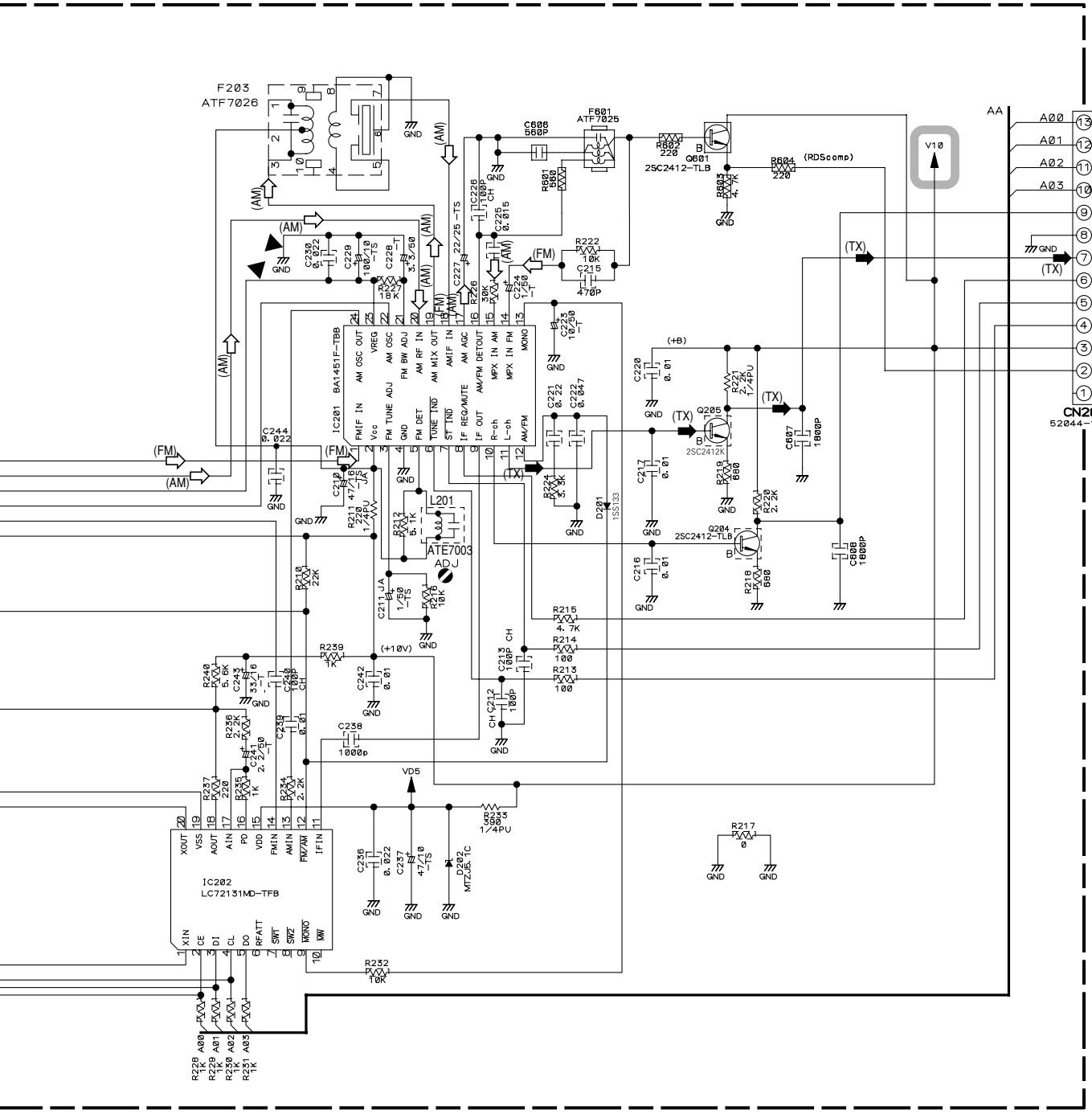


Notes

: The power supply is shown with the marked box.

1. RESISTORS
   Indicated in Ω, 1/16W±5% Tolerance unless otherwise noted K:KΩ, M:MΩ.
2. CAPACITORS
   Indicated in Capacity(μF)/VOLTAGE(V) unless otherwise noted P:PF.
3. DIODES
   No mark diode is 1SS133.

(TX) : AUDIO SIGNAL ROUTE (TUNER)
(AM) : AM SIGNAL ROUTE
(FM) : FM SIGNAL ROUTE



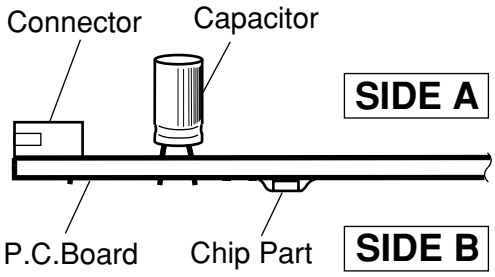
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

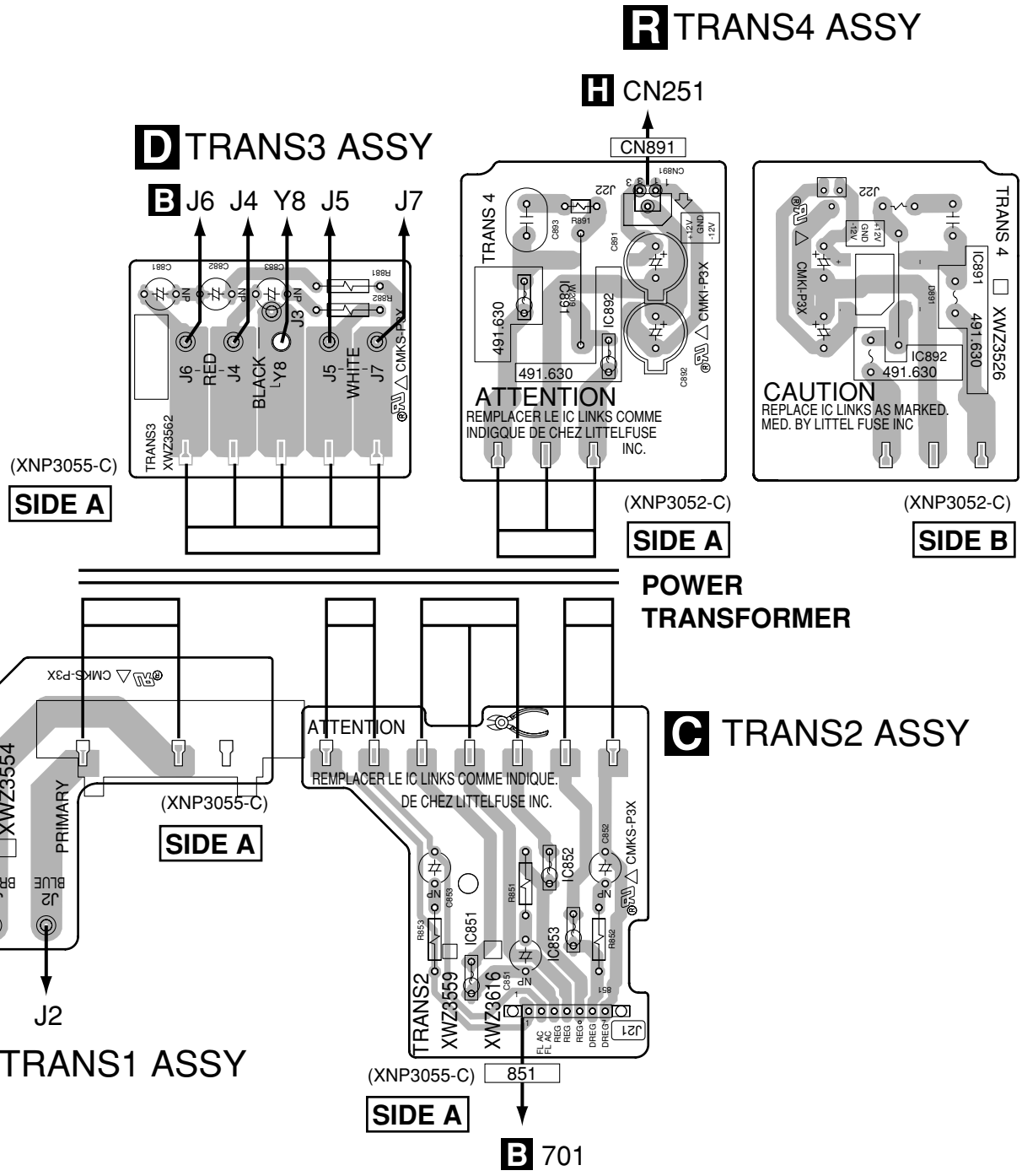
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 TRANS2, TRANS3, TRANS1 and TRANS4 ASSYS

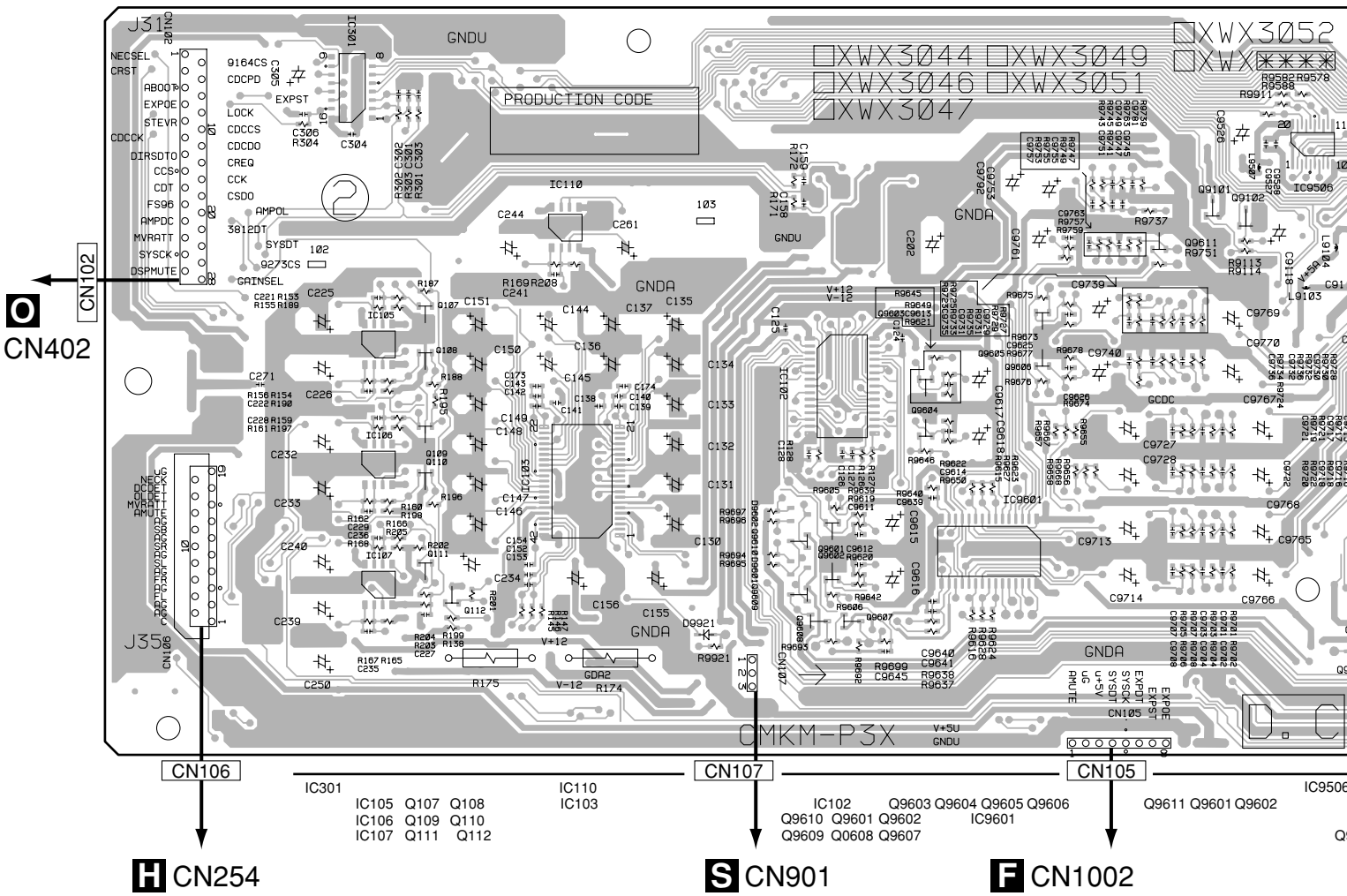
SIDE A **SIDE B**



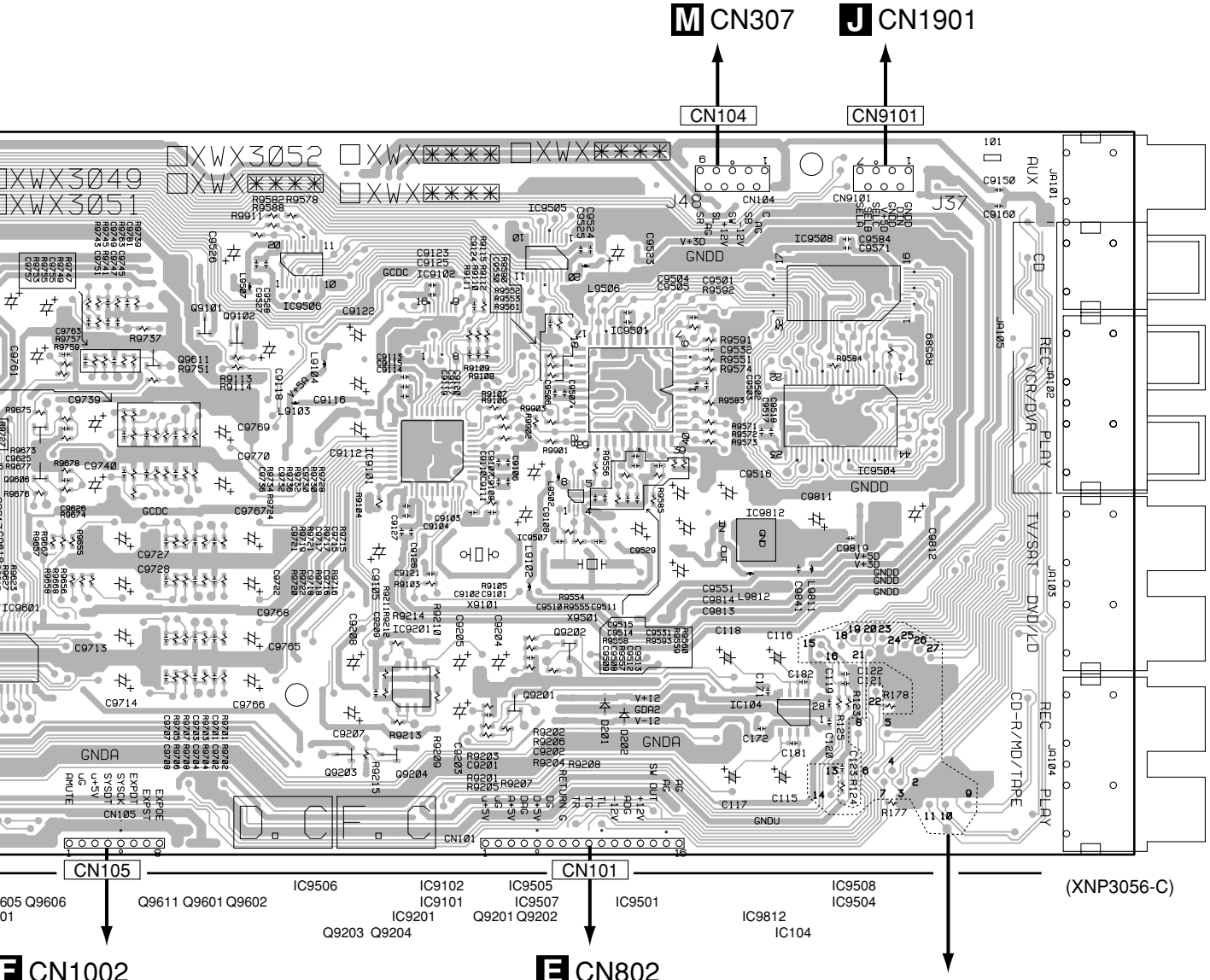
4.2 DD & INPUT ASSY

SIDE A

A D.D & INPUT ASSY



SIDE A



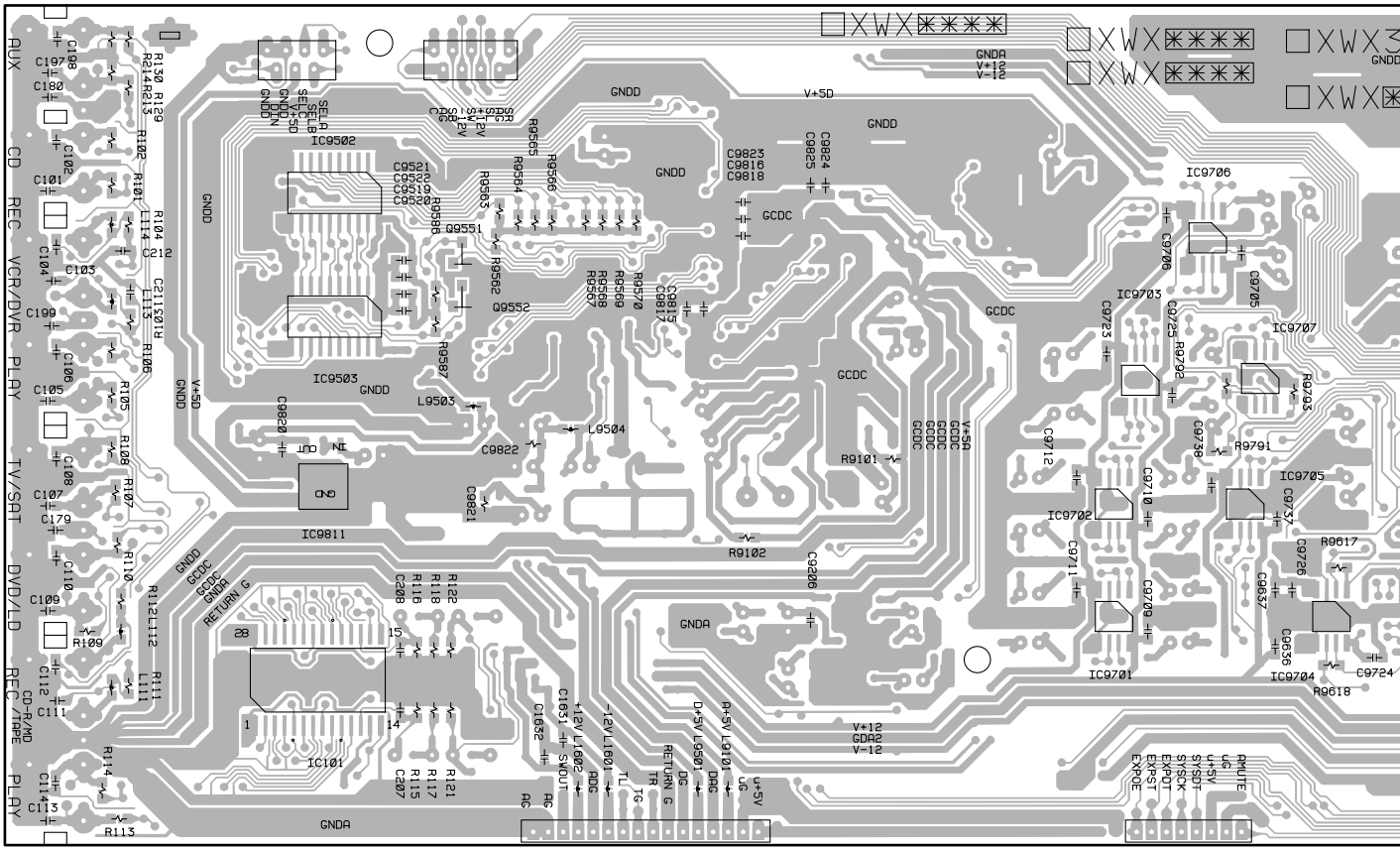
Note : The pin of function IC (IC101 TC9273F-007) can be checked from side-A by the through-hole round. The pin No. is printed on the side-A.

Even if the FM/AM TUNER MODULE is disconnected, other functions can operate.

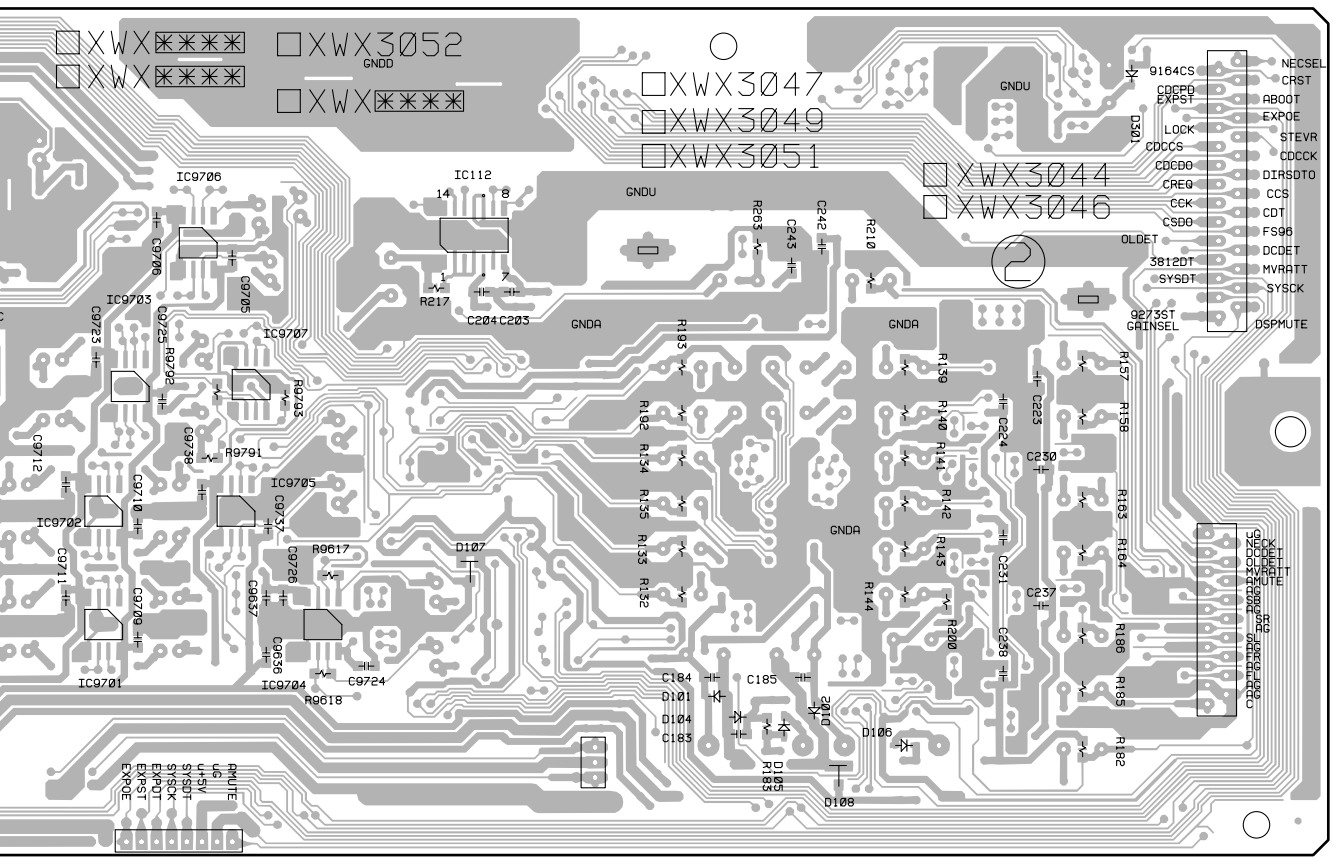
A

SIDE B

A D.D & INPUT ASSY



SIDE B



IC9705 IC112

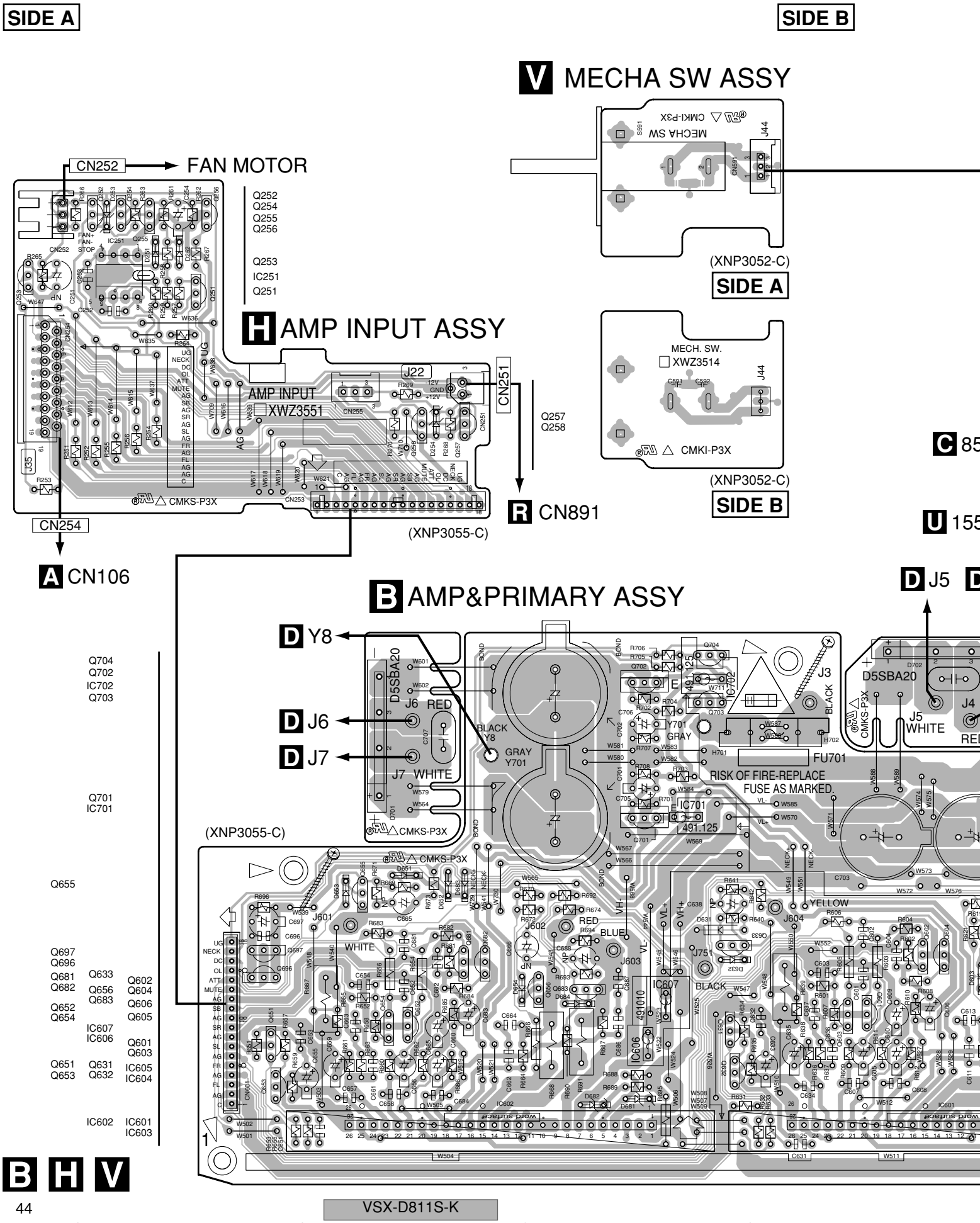
IC9703 IC9707

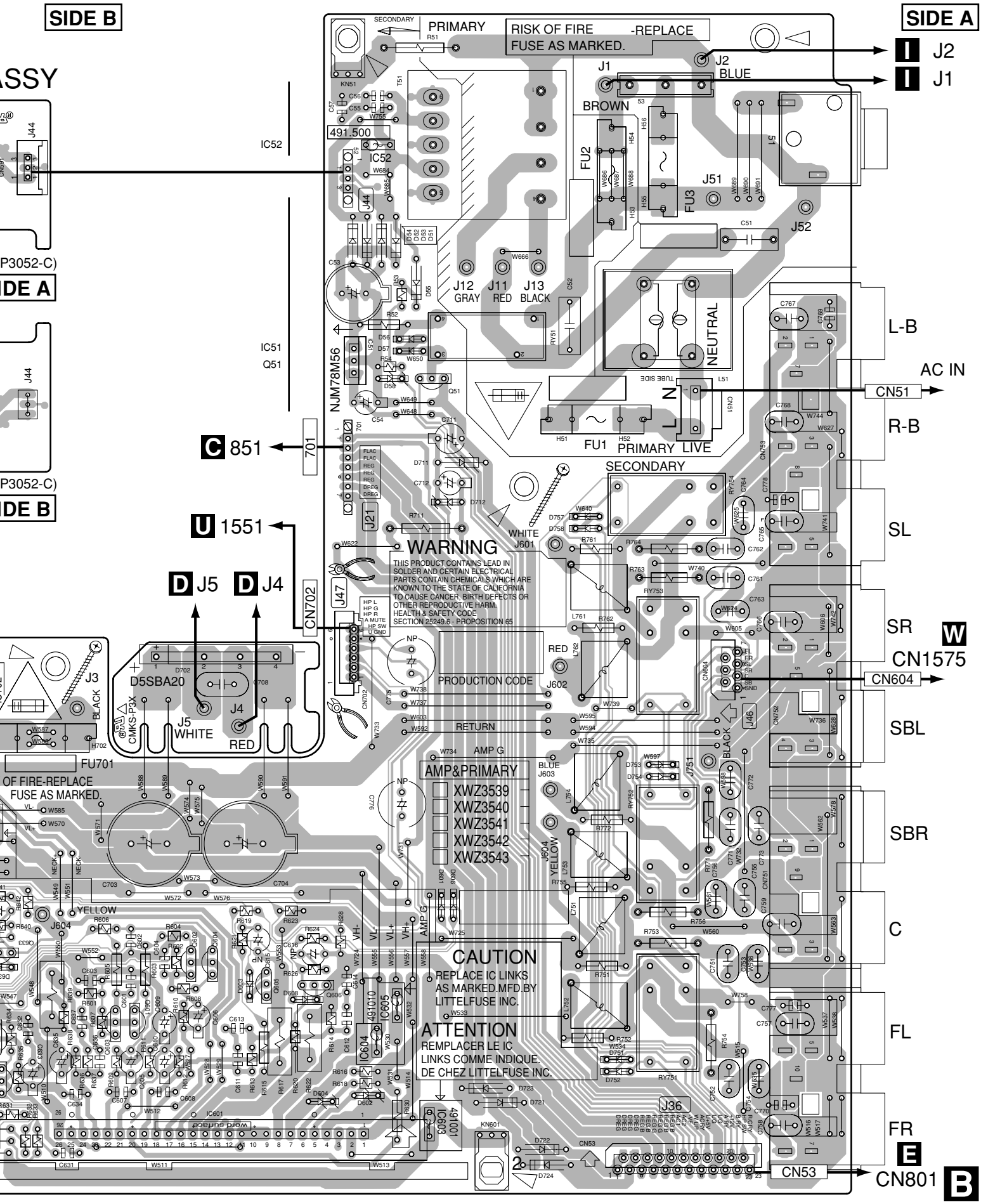
IC9702 IC9705

IC9701 IC9704

(XNP3056-C)

4.3 AMP & PRIMARY, AMP INPUT and MECHA SW ASSYS

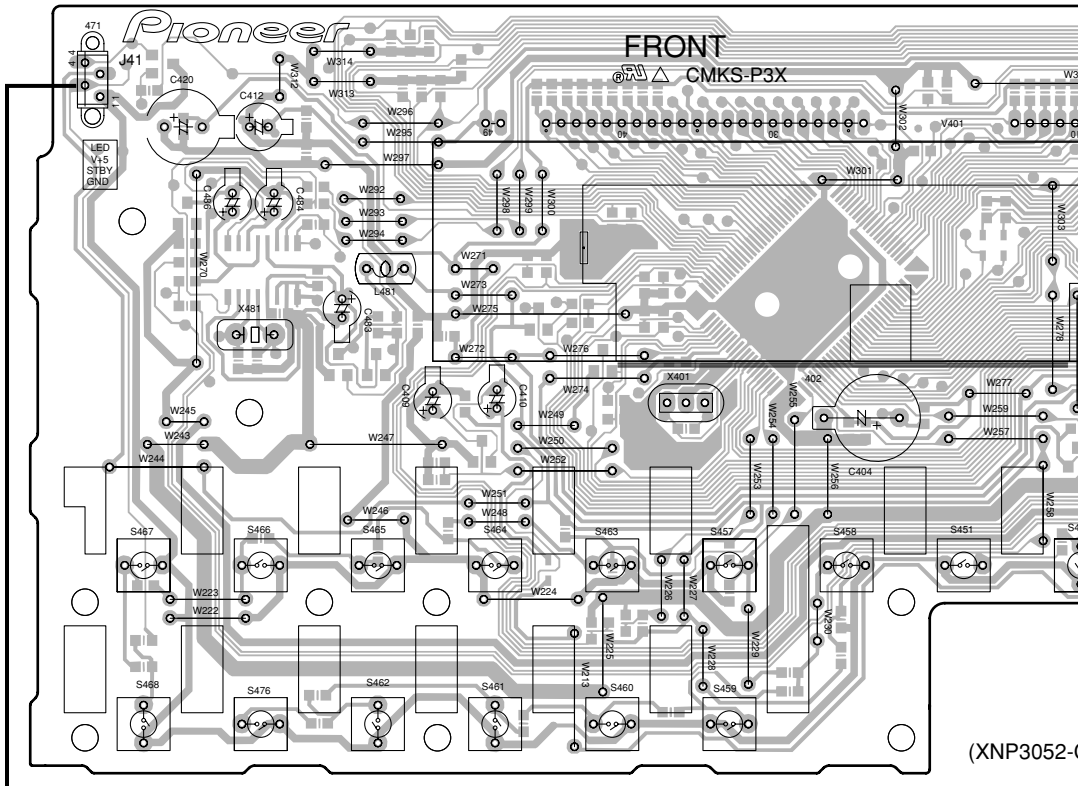



SIDE B
SIDE A
ASSY
(P3052-C)
IDE A
(P3052-C)
IDE B
SECONDARY
PRIMARY
R51
RISK OF FIRE -REPLACE
FUSE AS MARKED.
J1
J2
BLUE
BROWN
I J2
I J1
IC52
491.500
IC52
J44
FU2
FU3
J51
J52
C51
J12 GRAY
J11 RED
J13 BLACK
IC51
Q51
NJM78M56
RY51
NEUTRAL
L-B
AC IN
CN51
R-B
C 851
701
FU1 PRIMARY LIVE
SECONDARY
U 1551
WARNING
THIS PRODUCT CONTAINS LEAD IN SOLDER AND CERTAIN ELECTRICAL PARTS CONTAIN CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. HEALTH & SAFETY CODE SECTION 25249.6 - PROPOSITION 65
WHITE
J601
SL
D J5
D J4
CN702
J47
D5SBA20
J3
BLACK
J4
J5
WHITE
RED
SR
W
CN1575
CN604
PRODUCTION CODE
J602
RED
RETURN
SBL
FU701
OF FIRE-REPLACE
FUSE AS MARKED.
AMP G
AMP&PRIMARY
XWZ3539
XWZ3540
XWZ3541
XWZ3542
XWZ3543
J603
BLUE
J604
YELLOW
SBR
C
CAUTION
REPLACE IC LINKS
AS MARKED.MFD.BY
LITTELFUSE INC.
ATTENTION
REMPLACER LE IC
LINKS COMME INDIQUE.
DE CHEZ LITTELFUSE INC.
FL
J36
FR
E
CN53
CN801
B

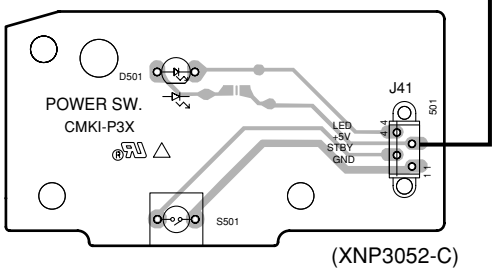
4.4 FRONT, R. ENCODER, POWER SW and H. P. ASSYS

SIDE A

O FRONT ASSY

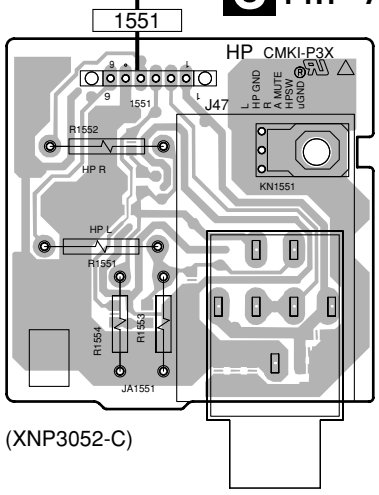


Q POWER SW ASSY

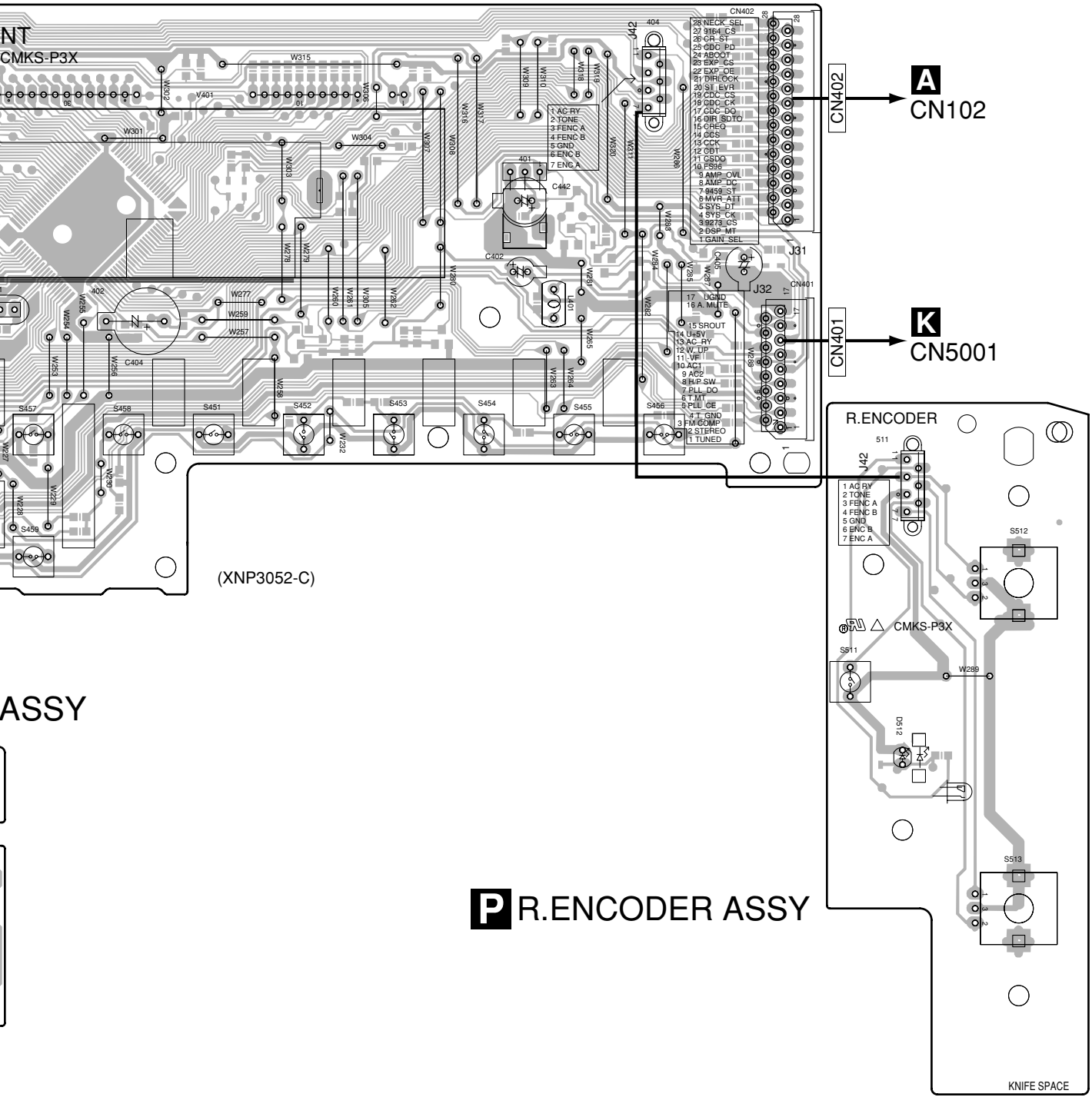


B CN702

U H.P ASSY



SIDE A

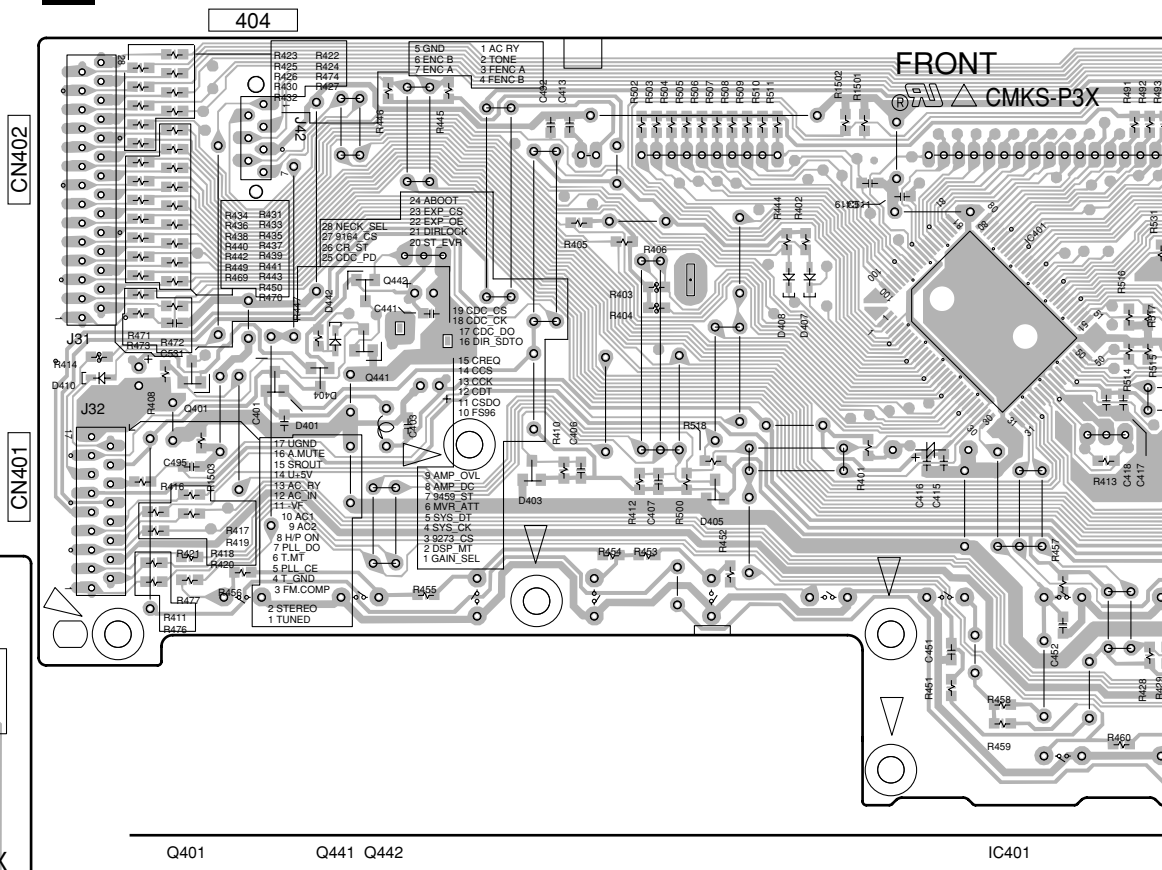


ASSY

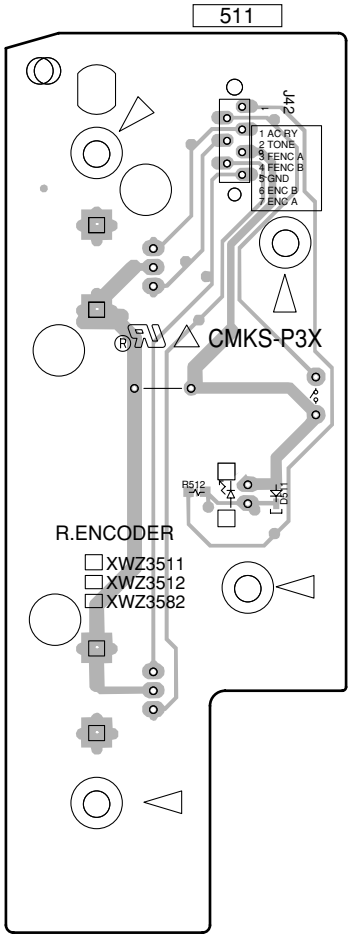
P R.ENCODER ASSY

SIDE B

O FRONT ASSY

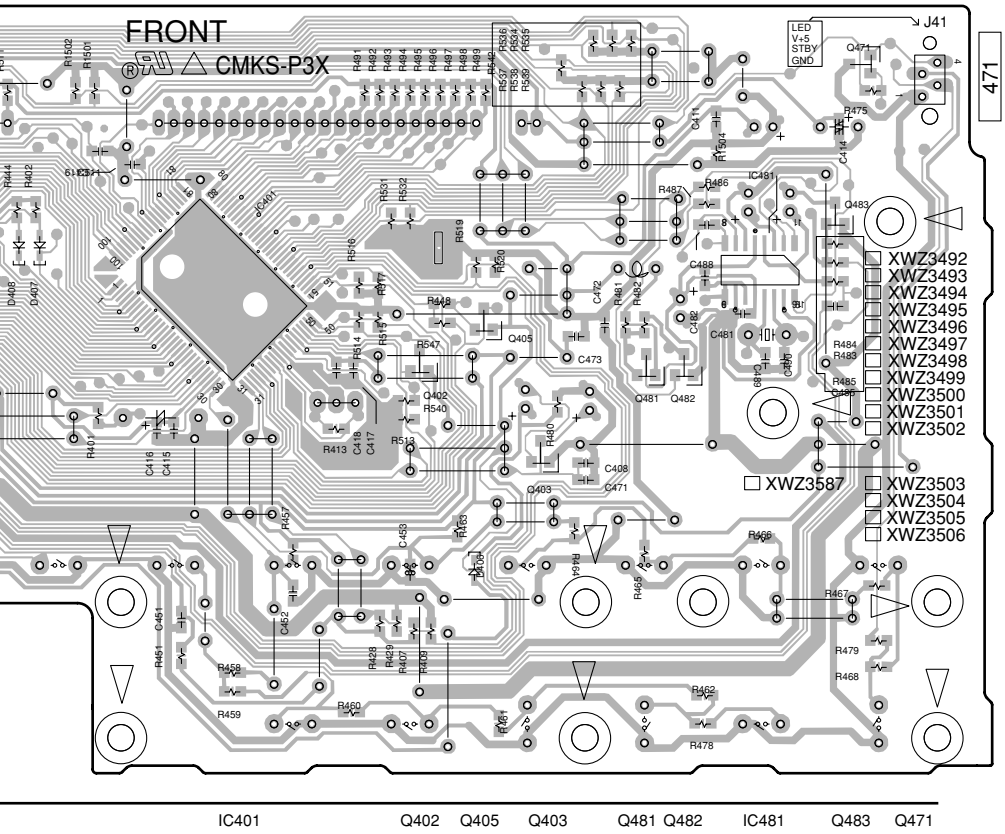


P R.ENCODER ASSY



(XNP3052-C)

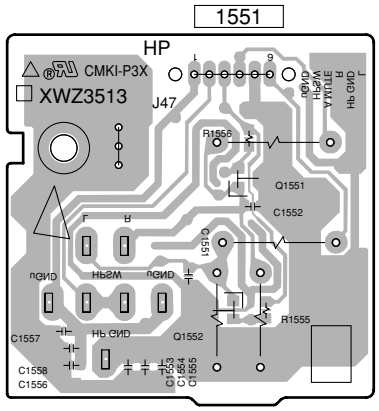
SIDE B



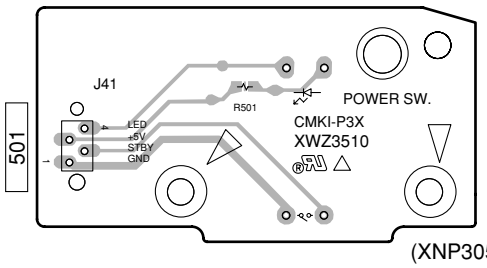
(XNP3052-C)

IC401 Q402 Q405 Q403 Q481 Q482 IC481 Q483 Q471

U H.P ASSY



(XNP3052-C)



(XNP3052-C)

Q POWER SW ASSY

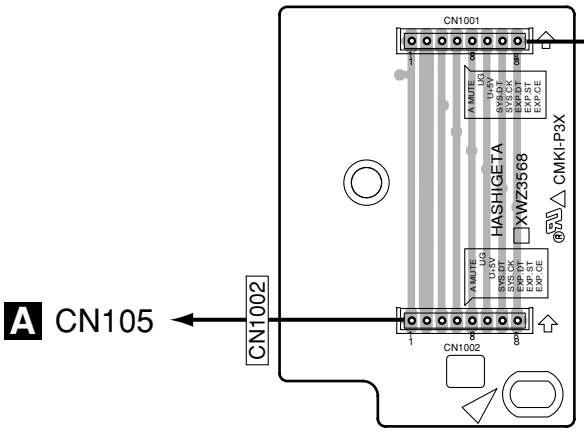
O Q U

4.5 REGULATOR, HASHIGETA and KAWA ASSYS

SIDE A

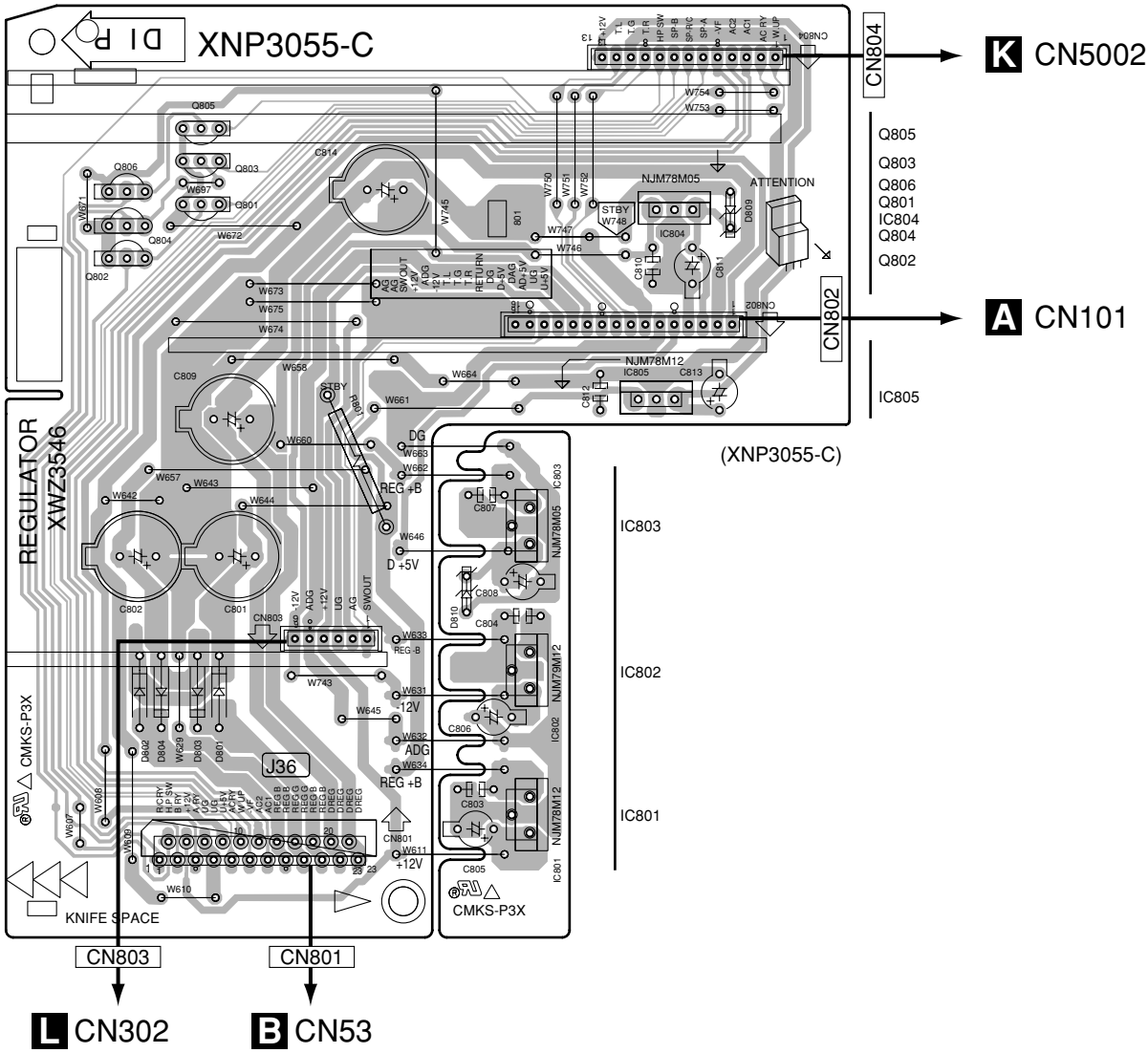
SIDE A

F HASHIGETA ASSY



(XNP3055-C)

E REGULATOR ASSY

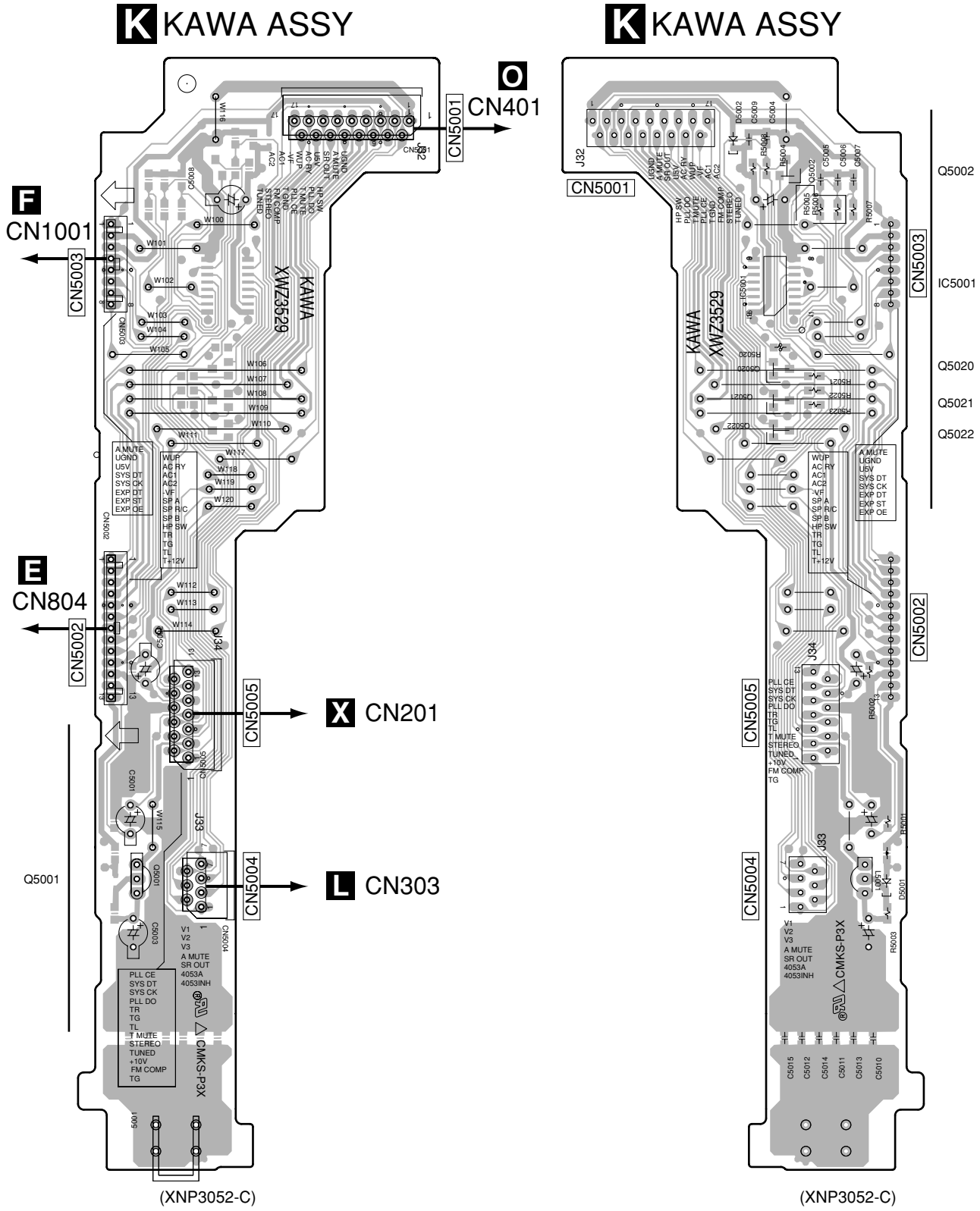


(XNP3055-C)

E F

E F

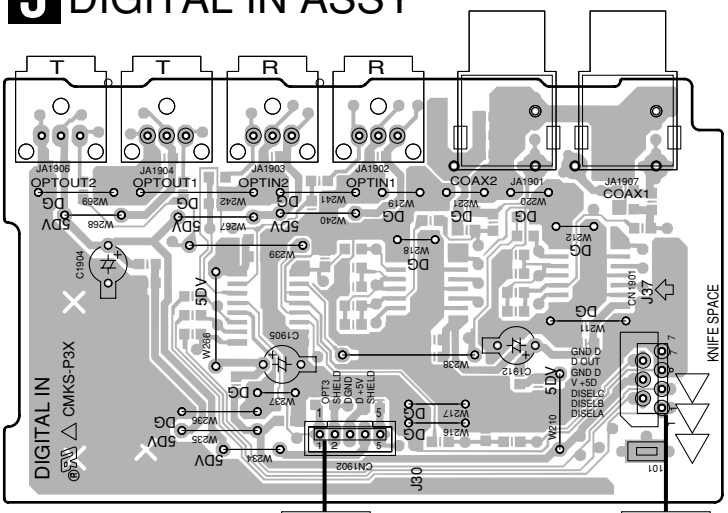
SIDE A **SIDE B**


K KAWA ASSY
K KAWA ASSY
O
CN401
CN5001
F
CN1001
CN5003
E
CN804
CN5002
X
CN201
CN5005
L
CN303
CN5004
Q5001
XWZ3529
KAWA
IC5001
Q5002
Q5020
Q5021
Q5022
CMKS-P3X
(XNP3052-C)
(XNP3052-C)

4.6 BOARD TO BOARD, DIGITAL IN, VIDEO and 6CH IN ASSYS

SIDE A

J DIGITAL IN ASSY



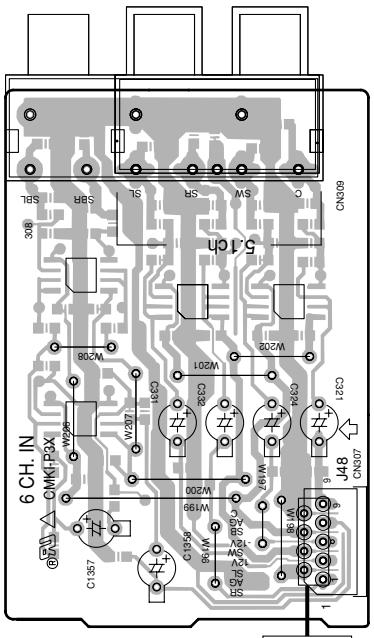
(XNP3052-C)

CN1902 → **T** CN951

CN1901 → **A** CN9101

SIDE A

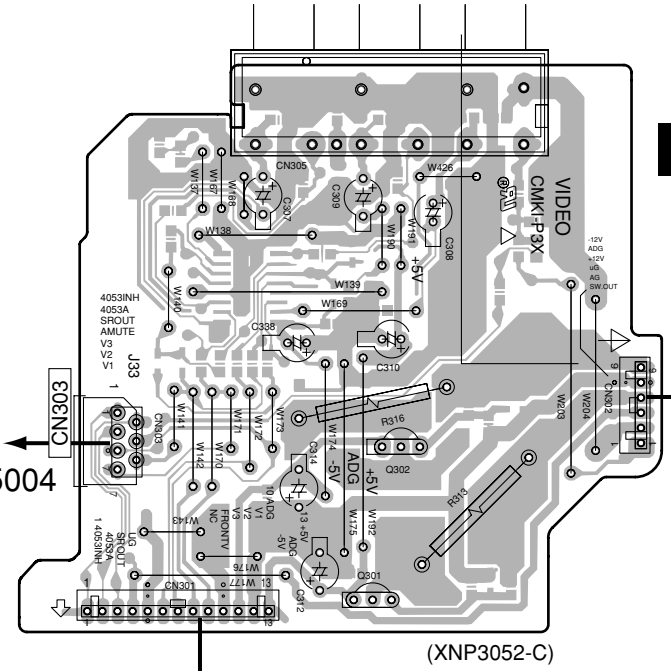
M 6CH IN ASSY



(XNP3052-C)

CN307 → **A** CN104

L VIDEO ASSY

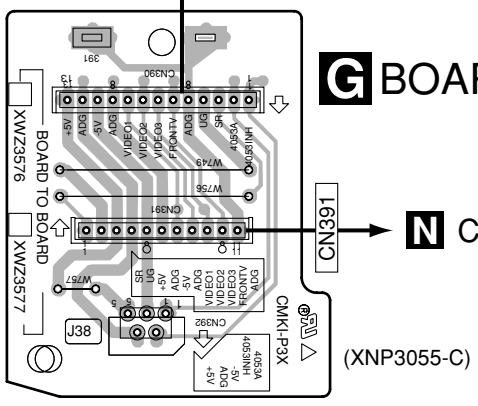


K CN5004

CN302 → **E** CN803

(XNP3052-C)

G BOARD TO BOARD ASSY



CN391 → **N** CN351

(XNP3055-C)

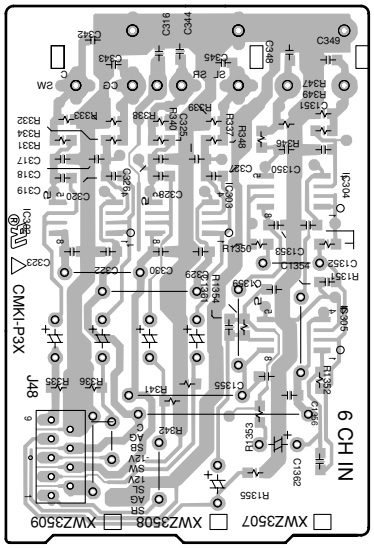
G J L M

G J L M

SIDE B

SIDE B

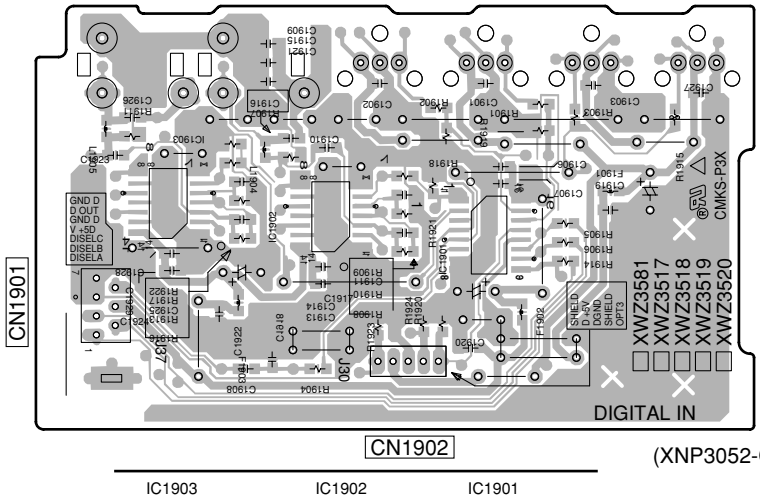
M 6CH IN ASSY



CN307

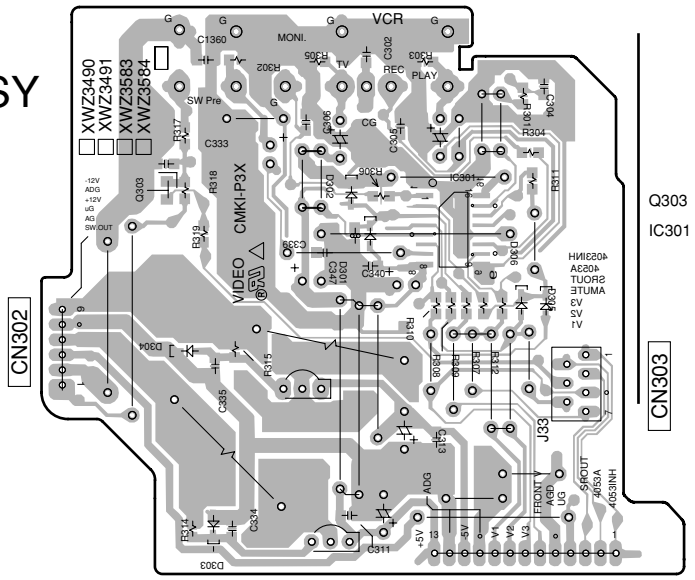
(XNP3052-C)

J DIGITAL IN ASSY



(XNP3052-C)

L VIDEO ASSY



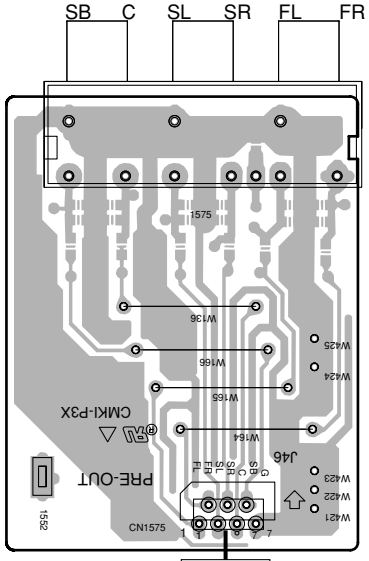
(XNP3052-C)

CN301

4.7 S. VIDEO, FRONT VIDEO, FRONT OPTICAL and PRI-OUT ASSYS

SIDE A

W PRE-OUT ASSY

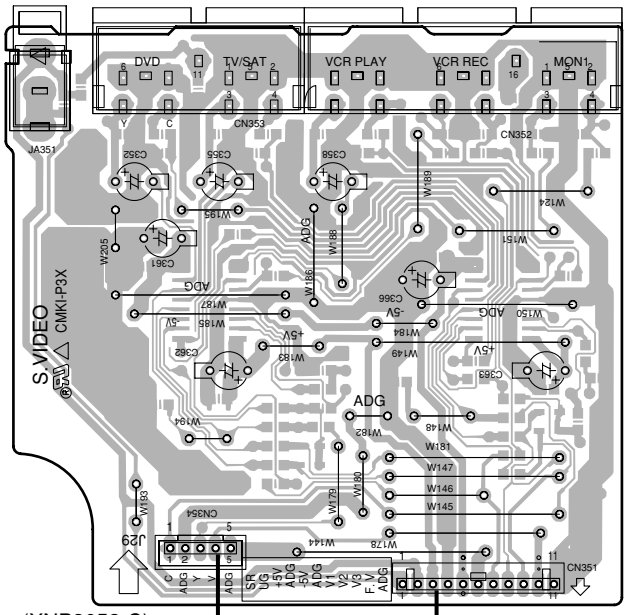


(XNP3052-C) CN1575

B CN604

SIDE A

N S. VIDEO ASSY

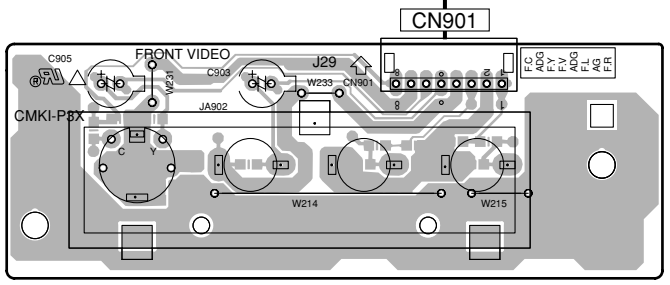


(XNP3052-C) CN354 CN351

S CN901 **G** CN391

A CN107

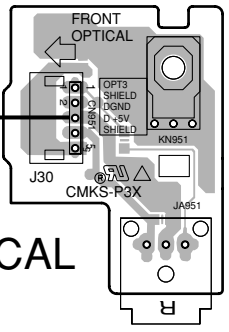
N CN354



(XNP3052-C)

S FRONT VIDEO ASSY

J CN1902



T FRONT OPTICAL ASSY

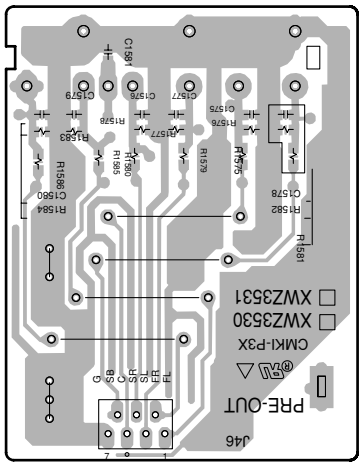
(XNP3052-C)

N S T W **N S T W**

SIDE B

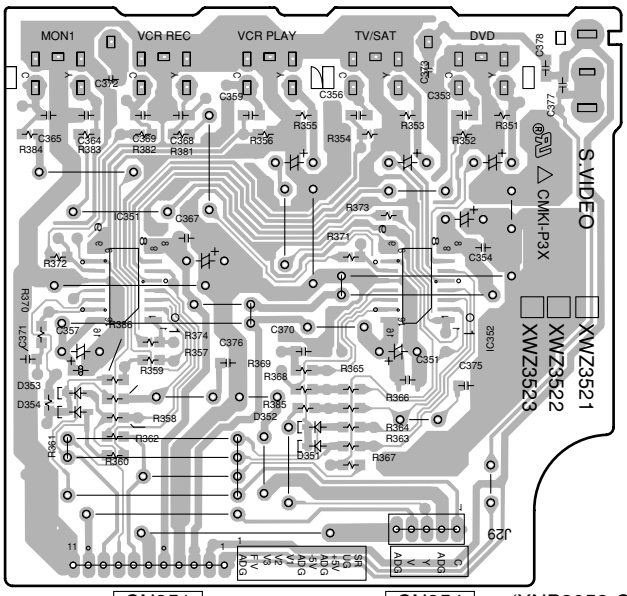
SIDE B

W PRE-OUT ASSY



CN1575 (XNP3052-C)

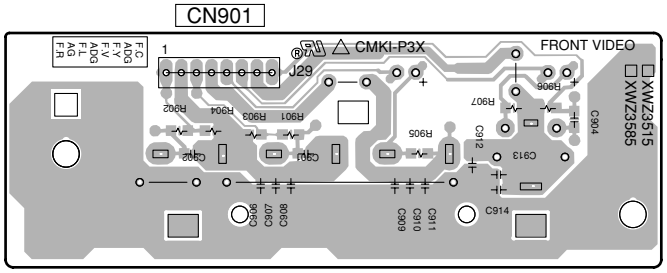
N S. VIDEO ASSY



IC351
IC352

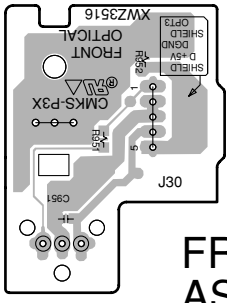
CN351 CN354 (XNP3052-C)

CN901



(XNP3052-C)

S FRONT VIDEO ASSY



(XNP3052-C)

T FRONT OPTICAL ASSY

N S T W

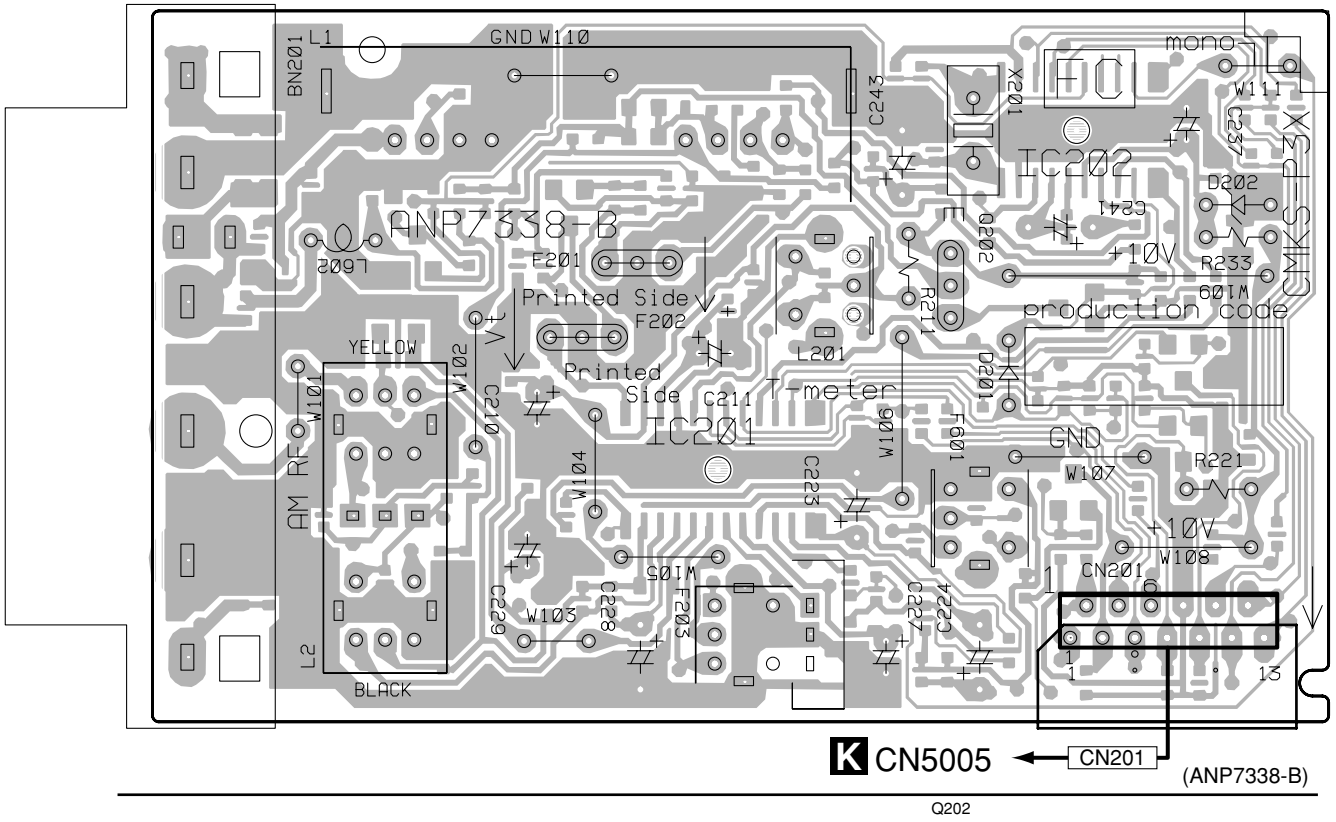
N S T W

4.8 FM/AM TUNER MODULE

SIDE A **SIDE B**

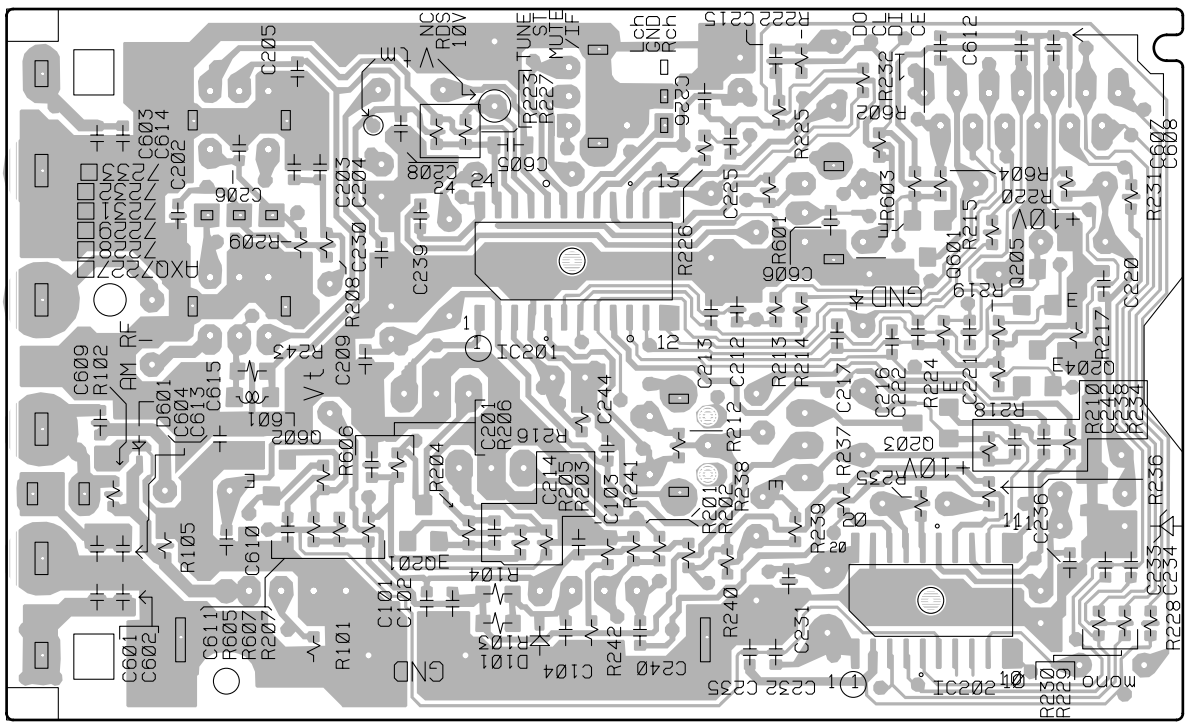
X FM/AM TUNER MODULE

SIDE A



X FM/AM TUNER MODULE

SIDE B



5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→	*56 x 10¹* →	*561*	*RD1/4PU 5 6 1 J*
47k Ω	→	*47 x 10³* →	*473*	*RD1/4PU 4 7 3 J*
0.5 Ω	→	*R50*		*RN2H R 5 0 K*
1 Ω	→	*1R0*		*RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→	*562 x 10¹* →	*5621*	*RN1/4PC 5 6 2 1 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	D.D & INPUT ASSY	XWX3049
NSP	1	AMP & PS ASSY	XWK3060
	2	AMP & PRIMARY ASSY	XWZ3540
	2	REGULATOR ASSY	XWZ3546
	2	AMP INPUT ASSY	XWZ3551
NSP	2	TRANS1 ASSY	XWZ3554
	2	TRANS2 ASSY	XWZ3559
NSP	2	TRANS3 ASSY	XWZ3562
	2	HASHIGETA ASSY	XWZ3568
	2	BOARD TO BOARD ASSY	XWZ3577
NSP	2	BINDER ASSY	XWZ3571
NSP	2	HOLDER ASSY	XWZ3574
NSP	1	COMPLEX ASSY	XWK3047
	2	FRONT ASSY	XWZ3502
	2	6CH IN ASSY	XWZ3508
	2	POWER SW ASSY	XWZ3510
	2	H.P. ASSY	XWZ3513
	2	MECHA SW ASSY	XWZ3514
	2	FRONT VIDEO ASSY	XWZ3515
	2	FRONT OPTICAL ASSY	XWZ3516
	2	DIGITAL IN ASSY	XWZ3519
	2	S. VIDEO ASSY	XWZ3522
	2	TRANS4 ASSY	XWZ3526
	2	KAWA ASSY	XWZ3529
	2	PRE-OUT ASSY	XWZ3530
	2	R. ENCODER ASSY	XWZ3582
	2	VIDEO ASSY	XWZ3584
	1	FM/AM TUNER MODULE	AXQ7232

COMPLEX ASSY

OTHERS

Mark	No.	Description	Part No.
	J 41	(JUMPER WIRED)	D15A04-100-2651
	J 42	(JUMPER WIRED)	D15A07-075-2651
	J 47	(JUMPER WIRED)	D20PYY0630E

AMP & PS ASSY

OTHERS

Mark	No.	Description	Part No.
	Y 8	(AWG14 BOARD IN)	ADX7284
	J 44	(JUMPER WIRED)	D20PYY0325E
	J 21	(JUMPER WIRED)	D20PYY0715E

A D.D & INPUT ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC9102		AK4382AVT
	IC9101		AK4586VQ
	IC112		BD3812F
	IC301		BU4094BCF
	IC9501		CS493292
	IC103		M62446FP
	IC9201		NJM2100M
	IC9812		NJM2391DL1-25
	IC9811		NJM2391DL1-33
	IC102		NJU7312AM
	IC9601		NJU7313AM
	IC9504		PD8097A
	IC9505		TC74LVX244FT
	IC9502, IC9503		TC74VHC574F
	IC9506		TC74VHCT244AFT
	IC9507		TC7WU04FU
	IC101		TC9273F-007
	IC104–IC107, IC110, IC9701–IC9707		UPC4570G2
	Q107–Q112, Q9201, Q9202		2SC3326
	Q9101, Q9204, Q9607, Q9609, Q9610		DTA124EK
	Q9102, Q9203, Q9608		DTC124EK
	D9601, D9602		1SS181
	D105, D106, D301, D9921		1SS355
	D107, D108		DAN217
	D201, D202		RB501V-40
	D104		UDZS5.1B
	D101, D102		UDZS6.8B

COILS AND FILTERS

Mark	No.	Description	Part No.
	L9101, L9501, L9504, L9811, L9812	(CHIP SOLID INDUCTOR)	ATL7002
	L111–L114, L1601, L1602		QTL1013
	L9102–L9104, L9502, L9503		QTL1013
	L9506, L9507	(CHIP SOLID INDUCTOR)	QTL1013

CAPACITORS

Mark	No.	Description	Part No.
	C9510, C9511		CCSRCH100D50
	C101–C114, C121–C123		CCSRCH101J50
	C126–C128, C152–C154		CCSRCH101J50
	C158, C159, C197, C198		CCSRCH101J50
	C207, C208, C221, C222		CCSRCH101J50
	C228, C229, C9160, C9201, C9202		CCSRCH101J50
	C9101, C9102		CCSRCH220J50
	C235, C241, C9117, C9749, C9751		CCSRCH221J50
	C9509, C9757		CCSRCH271J50
	C9530, C9731, C9735		CCSRCH331J50
	C9103, C9110, C9111, C9114, C9125		CCSRCH471J50
	C9503, C9505, C9507, C9513, C9515		CCSRCH471J50
	C9518, C9520, C9522, C9525, C9528		CCSRCH471J50

Mark	No.	Description	Part No.
	C9571, C9611–C9614, C9625, C9639		CCSRCH471J50
	C9729, C9815, C9816		CCSRCH471J50
	C9707, C9708, C9721, C9722		CCSRCH820J50
	C130–C137, C146–C151, C202		CEAT100M50
	C261, C305, C9207, C9208, C9523		CEAT100M50
	C9526		CEAT100M50
	C9105, C9106, C9108, C9116, C9122		CEAT101M10
	C9516, C9551, C9792, C9812, C9814		CEAT101M10
	C9740		CEAT220M25
	C9205		CEAT221M6R3
	C9112, C9529, C9769, C9770		CEAT2R2M50
	C9713, C9714, C9727, C9728, C9739		CEAT330M25
	C9753, C9765–C9768		CEAT330M25
	C144, C145		CEAT3R3M50
	C117, C118, C225, C226		CEAT470M50
	C232, C233, C239, C244		CEAT470M50
	C155, C156		CEAT471M10
	C115, C116, C234, C240		CEAT4R7M50
	C9203, C9204, C9615–C9618, C9761		CEAT4R7M50
	C9811, C9813		CEAT4R7M50
	C271, C9703, C9704, C9717, C9718		CKSRYB102K50
	C9745, C9781		CKSRYB102K50
	C119, C120, C124, C125, C138		CKSRYB103K50
	C141, C171, C172, C179, C180		CKSRYB103K50
	C183, C199, C203, C204		CKSRYB103K50
	C223, C224, C230, C231		CKSRYB103K50
	C237, C238, C242, C243, C304		CKSRYB103K50
	C9104, C9107, C9109, C9121		CKSRYB103K50
	C9123, C9124, C9209, C9502, C9504		CKSRYB103K50
	C9506, C9508, C9512, C9514, C9517		CKSRYB103K50
	C9519, C9521, C9524, C9527, C9531		CKSRYB103K50
	C9584, C9636, C9637, C9705, C9706		CKSRYB103K50
	C9709–C9712, C9723–C9726		CKSRYB103K50
	C9737, C9738, C9817		CKSRYB103K50
	C140, C143, C1631, C1632		CKSRYB104K16
	C173, C174, C9113, C9115, C9126		CKSRYB104K16
	C9206, C9818		CKSRYB104K16
	C9755		CKSRYB122K50
	C9701, C9702, C9715, C9716, C9763		CKSRYB222K50
	C9736		CKSRYB223K25
	C139, C142, C9626		CKSRYB223K50
	C236		CKSRYB472K50
	C184, C185, C9732		CKSRYB473K25
	C227, C9730		CKSRYF104Z25

RESISTORS

Mark	No.	Description	Part No.
⚠	R171, R172		RS1/16S102J
	R9104		RS1/16S1802F
⚠	R174, R175		RS1LMF101J
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	CN9101 (7P CONNECTOR)		52044-0745
	CN104 (9P CONNECTOR)		52044-0945
	CN106 (20P CONNECTOR)		52045-1945
	CN102 (28P CONNECTOR)		52045-2845
	JA101–JA104 (PIN JACK(4P))		AKB7048
	CN107 (CONNECTOR POST)		B3B-PH-K
	CN101 (16P SOCKET)		KP200TA16L
	CN105 (8P SOCKET)		KP200TA8L
	101–103 (PCB BINDER)		VEF1040
	X9501 (CRYSTAL RESONATOR) (27.0MHz)		VSS1086
	X9101 (CRYSTAL RESONATOR) (12.288MHz)		VSS1140

B AMP & PRIMARY ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC52 (PROTECTOR(500mA))		AEK7005
⚠	IC603 (PROTECTOR(1A))		AEK7009
⚠	IC701, IC702 (PROTECTOR(125mA))		AEK7020
⚠	IC604–IC607 (PROTECTOR(10A))		AEK7022
	IC51		NJM78M56FA
⚠	IC601, IC602		PAC011A
	Q703		2SA1145
	Q702		2SB1238X
	Q696, Q697		2SC1740S
	Q704		2SC1845
	Q605, Q606, Q633, Q655, Q656		2SC2240
	Q683		2SC2240
	Q601–Q604, Q631, Q632		2SC2878
	Q651–Q654, Q681, Q682		2SC2878
	Q701		2SD1859X
	Q51		KRC101M
	D56, D57, D601, D603, D606		1SS133
	D608, D631, D632, D651–D654		1SS133
	D683, D684, D751–D754		1SS133
	D757, D758		1SS133
⚠	D701, D702		D5SBA20(B)
	D711		MTZJ22D
	D58		MTZJ5.1A
	D712		MTZJ5.1B
	D602, D604, D681, D682		MTZJ8.2A
⚠	D51–D55, D721–D724		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
⚠	L51 (LINE FILTER)		ATF7018
	L751–L754, L761, L762 (AF COIL)		ATH1004

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
	RY751–RY754		XSR3002
⚠	RY51		XSR3003

CAPACITORS

Mark	No.	Description	Part No.
	C707, C708 (0.01/AC250V)		ACG1005
⚠	C51, C52 (10000pF/AC250V)		ACG7020
	C703, C704 (3300µF/42V)		ACH7135
	C701, C702 (4700µF/71V)		ACH7137
	C611–C614, C636, C637		CCPUCH6R8K50
	C661–C664, C686, C687		CCPUCH6R8K50
	C615, C616, C638, C665, C666		CEANP2R2M50
	C688		CEANP2R2M50
	C775, C776		CEANP470M50
	C705, C706		CEAT100M2A
	C712		CEAT101M10
	C609, C610, C635, C659, C660		CEAT101M16
	C685		CEAT101M16
	C711		CEAT101M35
	C53		CEAT102M16
	C697		CEAT221M10
	C54		CEAT470M25
	C605, C606, C633, C655, C656		CEAT4R7M50

Mark	No.	Description	Part No.
	C683		CEAT4R7M50
	C751–C756, C761–C764		CFTYA224J50
	C771, C772		CFTYA224J50
	C607, C608, C634, C657, C658		CKPUYB101K50
	C684		CKPUYB101K50
	C601, C602, C631, C651, C652		CKPUYB102K50
	C681, C696, C769, C770		CKPUYB102K50
	C603, C604, C632, C653, C654		CKPUYB331K50
	C682		CKPUYB331K50
	C55–C57		CKPUYF103Z25
	C757–C759, C765–C768, C773		CQMBA472J50

RESISTORS

⚠	R52	RD1/2PM270J
⚠	R615	RD1/4PU331J
⚠	R751, R752, R755, R761, R762	RD1/4PUF101J
⚠	R772	RD1/4PUF101J
⚠	R753, R754, R756, R763, R764	RS1LMF4R7J
⚠	R771	RS1LMF4R7J
⚠	R711	RS2LMF332J
⚠	R617, R622, R639, R667, R668	XCN3001
⚠	R691 (0.22Ω/5W)	XCN3001
	Other Resistors	RD1/4PU###J

OTHERS

	52 (3P CABLE HOLDER)	51048-0300
	CN604 (7P CONNECTOR)	52045-0745
	CN53 (23P CONNECTOR)	52045-2345
	CN702 (6P CONNECTOR)	52147-0610
	H51, H52 (FUSE CLIP)	AKR7001
⚠	T51 (STANDBY TRANSFORMER)	ATT7037
	CN601 (18P PLUG)	KM200TA18
	CN51 (AC CODE SOCKET)	RKP1751
	KN51, KN601 (EARTH METAL FITTING)	VNF1084
	CN751SP (TERMINAL 8-P)	XKE3017
	CN753 (TERMINAL 4-P)	XKE3018
	CN752 (TERMINAL 6-P)	XKE3019
⚠	701 (7P CABLE HOLDER)	XKP3047

C TRANS2 ASSY

SEMICONDUCTORS

⚠	IC853 (PROTECTOR (3A))	AEK7015
⚠	IC851, IC852 (PROTECTOR (4A))	AEK7018

OTHERS

	851 (7P CABLE HOLDER)	XKP3047

D TRANS3 ASSY

TRANS3 ASSY has no service part.

E REGULATOR ASSY

SEMICONDUCTORS

	IC803, IC804	NJM78M05FA
	IC801, IC805	NJM78M12FA
	IC802	NJM79M12FA
	Q801, Q803, Q805	KRA103M
	Q802, Q804, Q806	KRC102M
	D809, D810	MTZJ6.2A
⚠	D801–D804	S5688G

CAPACITORS

Mark	No.	Description	Part No.
	C808, C811		CEAT101M10
	C805, C806, C813		CEAT101M16
	C801, C802		CEAT222M25
	C809		CEAT332M16
	C803, C804, C807, C810, C812		CKPUYF103Z25

OTHERS

	CN801 (23P CONNECTOR)	52045-2345
	CN804 (13P PLUG)	KM200TA13
	CN802 (16P PLUG)	KM200TA16
	CN803 (6P PLUG)	KM200TA6

F HASHIGETA ASSY

OTHERS

	CN1001, CN1002 (8P PLUG)	KM200TA8

G BOARD TO BOARD ASSY

OTHERS

	CN391 (11P PLUG)	KM200TA11
	CN390 (13P PLUG)	KM200TA13

H AMP INPUT ASSY

SEMICONDUCTORS

	IC251	NJM4558D-D
	Q257	2SA933S
	Q251, Q256	2SC2878
	Q252	2SD1858X
	Q254	KRA103M
	Q253, Q255	KRC103M
	D251, D252	1SS133
	D253	MTZJ27D
	D254	MTZJ5.1B

CAPACITORS

	C251	CEANP470M25
	C254	CEAT101M25
	C252, C253	CKPUYF103Z25

RESISTORS

	All Resistors	RD1/4PU###J

OTHERS

	CN251 (3P CONNECTOR)	52044-0345
	CN254 (19P CONNECTOR)	52044-1945
	CN252 (3P PLUG)	KM250MA3L
	CN253 (18P SOCKET)	KP200TA18L

I TRANS1 ASSY

TRANS1 ASSY has no service part.

J DIGITAL IN ASSY

SEMICONDUCTORS

	IC1901	TC74ACT151F
	IC1902, IC1903	TC74HCU04AF

COILS AND FILTERS

	F1901–F1903 (CHIP BEAD)	DTF1067
	L1904, L1905 (CHIP SOLID INDUCTOR)	QTL1013

CAPACITORS

	C1918	CCSRCH221J50
	C1907, C1914, C1928	CCSRCH271J50
	C1911, C1925	CCSRCH470J50
	C1916, C1926	CCSRCH471J50

Mark No.	Description	Part No.
	C1904, C1905, C1912	CEAT101M10
	C1915	CKSRYB102K50
	C1906, C1910, C1913, C1919, C1920	CKSRYB103K50
	C1923, C1929	CKSRYB103K50
	C1901–C1903, C1908, C1909	CKSRYB104K25
	C1921, C1922	CKSRYB104K25
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN1901 (7P CONNECTOR)	52045-0745
	CN1902 (CONNECTOR POST)	B5B-PH-K
	JA1904 (OPT. LINK OUT 12MB/S)	JFJ3000-010020
	JA1902, JA1903 (OPT. LINK IN 12MB/S)	JFJ4000-010020
	101 (PCB BINDER)	VEF1040
	JA1901, JA1907 (1P PIN JACK)	VKB1077

K KAWA ASSY

	SEMICONDUCTORS	
	IC5001	BU4094BCF
	Q5001	2SC1740S
	Q5020–Q5022	DTC114TK
	Q5002	DTC143EK
	D5001, D5002	1SS355
	COILS AND FILTERS	
	L5001 (CHIP SOLID INDUCTOR)	QTL1013
	CAPACITORS	
	C5004–C5007	CCSRCH101J50
	C5012	CCSRCH471J50
	C5001, C5002	CEAT100M50
	C5003	CEAT101M16
	C5009	CKSRYB103K50
	C5011	CKSRYB104K16
	C5010	CKSRYF105Z10
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN5004 (7P CONNECTOR)	52044-0745
	CN5005 (13P CONNECTOR)	52044-1345
	CN5001 (17P CONNECTOR)	52044-1745
	CN5002 (13P SOCKET)	KP200TA13L
	CN5003 (8P SOCKET)	KP200TA8L
	5001 (SCREW PLATE)	VNE1948

L VIDEO ASSY

	SEMICONDUCTORS	
	IC301	NJM2296M
	Q302	2SA1515
	Q303	2SC3326
	Q301	2SC3377
	D301, D302, D305, D306	1SS355
	D303, D304	UDZS6.2B
	CAPACITORS	
	C347	CCSRCH470J50
	C307–C310, C312, C314, C338	CEAT470M25
	C1360, C302	CKSRYB103K50
	C339, C340	CKSRYB104K25
	C304–C306	CKSRYB221K50
	C333	CKSRYB331K50
	C311, C313	CKSRYB473K25
	RESISTORS	
⚠	R313, R316	RS3LMF560J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN303 (7P CONNECTOR)	52044-0745
	CN305 (6P PIN JACK)	AKB7123
	CN301 (13P SOCKET)	KP200TA13L
	CN302 (6P SOCKET)	KP200TA6L

M 6CH IN ASSY

	SEMICONDUCTORS	
	IC302–IC305	NJM4558MD
	CAPACITORS	
	C1354, C1359, C319, C320	CCSRCH101J50
	C327, C328, C342–C345	CCSRCH101J50
	C348, C349	CCSRCH101J50
	C1362	CCSRCH121J50
	C1361	CCSRCH680J50
	C1357	CEAT220M25
	C1358, C321, C324, C331, C332	CEAT4R7M50
	C1352, C1353, C1355, C1356, C316	CKSRYB103K50
	C322, C323, C329, C330	CKSRYB103K50
	C1350, C1351, C317, C318	CKSRYB221K50
	C325, C326	CKSRYB221K50
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN307 (9P CONNECTOR)	52044-0945
	308 (6P PIN JACK)	AKB7089

N S.VIDEO ASSY

	SEMICONDUCTORS	
	IC351, IC352	NJM2296M
	D351–D354	1SS355
	CAPACITORS	
	C375, C376	CCSRCH470J50
	C352, C355, C358, C361–C363	CEAT470M25
	C366	CEAT470M25
	C372, C373, C378	CKSRYB103K50
	C351, C353, C354, C356, C357	CKSRYB104K25
	C359, C367	CKSRYB104K25
	C364, C365, C368–C371	CKSRYB221K50
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN353 (2-4P MINI DIN SOCKET)	AKP7020
	CN352 (3-4P MINI DIN SOCKET)	AKP7043
	CN354 (CONNECTOR POST)	B5B-PH-K
	CN351 (11P SOCKET)	KP200TA11L
	JA351 (JACK)	RKN1004

O FRONT ASSY

Mark No.	Description	Part No.
SEMICONDUCTORS		
	IC481	BU1923F
	IC401	PDG268B
	Q481	2SA1037K
	Q483	2SC3326
	Q401, Q402, Q442, Q471	DTA124EK
	Q403, Q441, Q482	DTC143EK
	D406, D410, D442	1SS355
	D403, D405	DAN217
	D401, D404	DAP202K
	D407, D408	RB501V-40
COILS AND FILTERS		
	L401, L481	LFEA2R2J
SWITCHES AND RELAYS		
	S451–S468, S476	ASG1051
CAPACITORS		
	C420 (220µF/35V)	ACH7101
	C404 (0.047F/5.5V)	ACH7132
	C489, C490	CCSRCH270J50
	C511	CCSRCH471J50
	C488	CCSRCH561J50
	C442	CEAL470M10
	C483	CEAT101M10
	C486	CEAT1R0M50
	C402	CEAT221M6R3
	C409, C410, C484	CEAT2R2M50
	C412	CEAT470M50
	C405	CEAT471M6R3
	C451–C453, C472, C481, C482	CKSRYB102K50
	C492, C495	CKSRYB102K50
	C401, C403, C411, C419, C441	CKSRYB103K50
	C531	CKSRYB103K50
	C408, C416, C418, C471	CKSRYB104K16
	C485	CKSRYB472K50
	C406, C407	CKSRYB473K16
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	471 (CABLE HOLDER (4P))	51063-0405
	404 (CABLE HOLDER (7P))	51063-0705
	CN401 (17P CONNECTOR)	52044-1745
	CN402 (28P CONNECTOR)	52044-2845
	V401 (FL TUBE)	XAV3013
	X481 (CRYSTAL RESONATOR) (4.332MHz)	ASS7004
	X401 (CERAMIC RESONATOR) (7.2MHz)	ASS7039
	401 (REMOTE RECEIVER UNIT)	GP1U27X

P R.ENCODER ASSY

Mark No.	Description	Part No.
SEMICONDUCTORS		
	D512	SLI-343DCW(STU)
	D511	UDZS5.6B
SWITCHES AND RELAYS		
	S511	ASG1051
	S513	XSX3005
	S512	XSX3006
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	511 (CABLE HOLDER (7P))	51063-0705
	512 (LED HOLDER)	XAK3187

Q POWER SW ASSY

Mark No.	Description	Part No.
SEMICONDUCTORS		
	D501	BR3371XJ30A
SWITCHES AND RELAYS		
	S501	ASG1051
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	501 (CABLE HOLDER (4P))	51063-0405

R TRANS4 ASSY

Mark No.	Description	Part No.
SEMICONDUCTORS		
	IC891, IC892	AEK7006
	D891	S1WB(A)60SD
CAPACITORS		
	C891, C892	CEAT471M35
OTHERS		
	CN891 (3P CONNECTOR)	52045-0345

S FRONT VIDEO ASSY

Mark No.	Description	Part No.
CAPACITORS		
	C903, C905	CEAL470M25
	C908, C911, C914	CKSRYB103K50
	C904, C906, C909, C912	CKSRYB104K25
	C901, C902	CKSRYB221K50
	C907, C910, C913	CKSRYB471K50
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	JA902 (PIN JACK (4P))	AKX7014

T FRONT OPTICAL ASSY

Mark No.	Description	Part No.
CAPACITORS		
	C951	CKSRYB104K25
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	JA951 (OPT. LINK IN 12MB/S)	JFJ4000-010020
	CN951 (CONNECTOR)	S5B-PH-K
	KN951 (EARTH METAL FITTING)	VNF1084

U H.P. ASSY

Mark No.	Description	Part No.
SEMICONDUCTORS		
	Q1551, Q1552	2SC3326
CAPACITORS		
	C1554, C1557	CCSRCH471J50

Mark No.	Description	Part No.
C1553, C1556		CKSRYB103K50
C1555, C1558		CKSRYB104K16
C1551, C1552		CKSRYB223K50
RESISTORS		
⚠ R1553, R1554		RS1LMF471J
⚠ R1551, R1552		RS2LMF331J
Other Resistors		RS1/16S###J
OTHERS		
1551 (6P CABLE HOLDER)		51048-0600
JA1551 (HEADPHONE JACK)		RKB1014
KN1551 (EARTH METAL FITTING)		VNF1084

V MECHA SW ASSY

SWITCHES AND RELAYS	
S591	ASG7014
CAPACITORS	
C591, C592	CKSRYB103K50
OTHERS	
CN591 (3PJUMPER CONNECTOR)	52151-0310

W PRE-OUT ASSY

CAPACITORS	
C1581	CKSRYB103K50
RESISTORS	
All Resistors	RS1/16S###J
OTHERS	
CN1575 (7P CONNECTOR)	52045-0745
1575 (PIN JACK(6P))	AKB7089

X FM/AM TUNER MODULE

SEMICONDUCTORS	
IC201	BA1451F
IC202	LC72131MD
Q201, Q204, Q205, Q601	2SC2412K
Q202	DTA124ES
Q203, Q602	DTC124EK
D201	1SS133
D601	HVU187
D202	MTZJ5.1C
D101	UDZS6.8B
COILS AND FILTERS	
L201 (FM DETECTOR COIL)	ATE7003
F202 (CERAMIC FILTER)	ATF-107
F201 (CERAMIC FILTER)	ATF-119
F601 (ANTIBIRDY FILTER)	ATF7025
F203 (AM CERAMIC FILTER)	ATF7026
L602	LAU2R2J
L601	LCTA270J2520
CAPACITORS	
C605	CCSQCH680J50
C212, C213, C226, C233–C235	CCSRCH101J50
C240, C614	CCSRCH101J50
C206	CCSRCH120J50
C231, C232	CCSRCH150J50
C223	CEAT100M50

Mark No.	Description	Part No.
C229		CEAT101M10
C224		CEAT1R0M50
C227		CEAT220M25
C241		CEAT2R2M50
C243		CEAT330M16
C228		CEAT3R3M50
C237		CEAT470M10
C211		CEJQ1R0M50
C210		CEJQ470M16
C103, C104, C204, C238, C609		CKSRYB102K50
C102, C208, C216, C217, C220		CKSRYB103K50
C239, C242, C604, C610, C615		CKSRYB103K50
C225		CKSRYB153K50
C607, C608		CKSRYB182K50
C201, C205, C214, C230, C236		CKSRYB223K50
C244, C611		CKSRYB223K50
C221		CKSRYB224K10
C603		CKSRYB392K50
C215		CKSRYB471K50
C202, C222		CKSRYB473K16
C606		CKSRYB561K50
RESISTORS		
R211		RD1/4PU221J
R221		RD1/4PU222J
R233		RD1/4PU391J
R103, R104		RS1/10S221J
Other Resistors		RS1/16S###J
OTHERS		
CN201 (13P CONNECTOR)		52044-1345
BN201 (2P TERMINAL WITH PAL)		AKA7002
0 (SHIELD CASE T)		ANK7072
0 (SHIELD CASE B)		ANK7073
X201 (CRYSTAL RESONATOR) (7.2MHz)		ASS1093
1 (FM FRONTEND)		AXF7005
2 (AM RF TUNING BLOCK)		AXX7072

6. ADJUSTMENT
6.1 TUNER SECTION

■ AM Tuner Section
• There is no adjustment in the AM tuner.

■ FM Tuner Section
• Set the mode selector to FM BAND.
• Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	ANT. Input level and signal condition			Adjustment	
		Frequency (MHz)	Modulation	Input Level (dBμV)	Adjust point	Contents
1	T-METER Adjustment	98	OFF	80	L201	Adjust L201 so that the DC voltage between Pin 21 and Pin 23 of IC201 (Test point Vtm) gets within 0 ± 50mV.

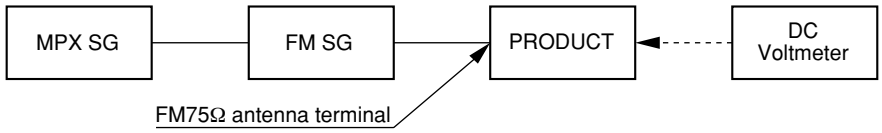


Fig.1 Adjustment Wiring Diagram

X FM/AM TUNER MODULE

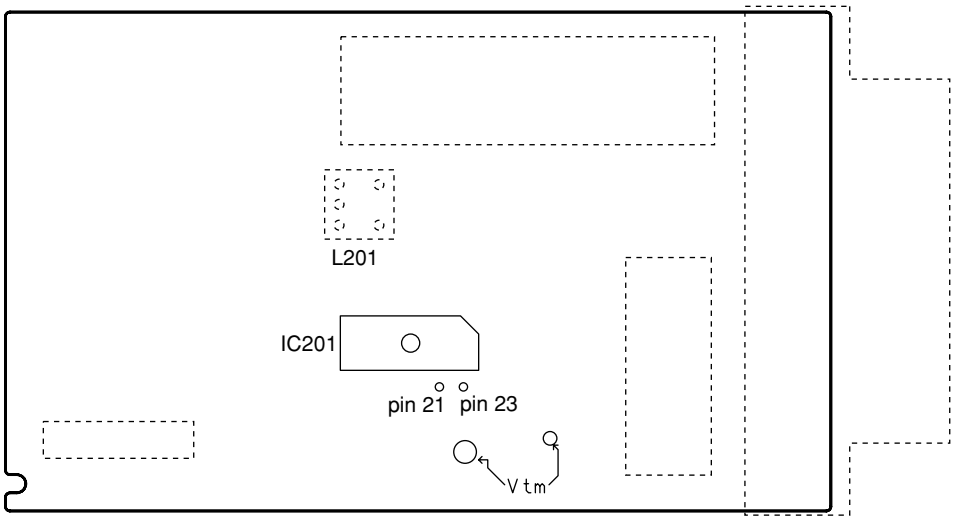
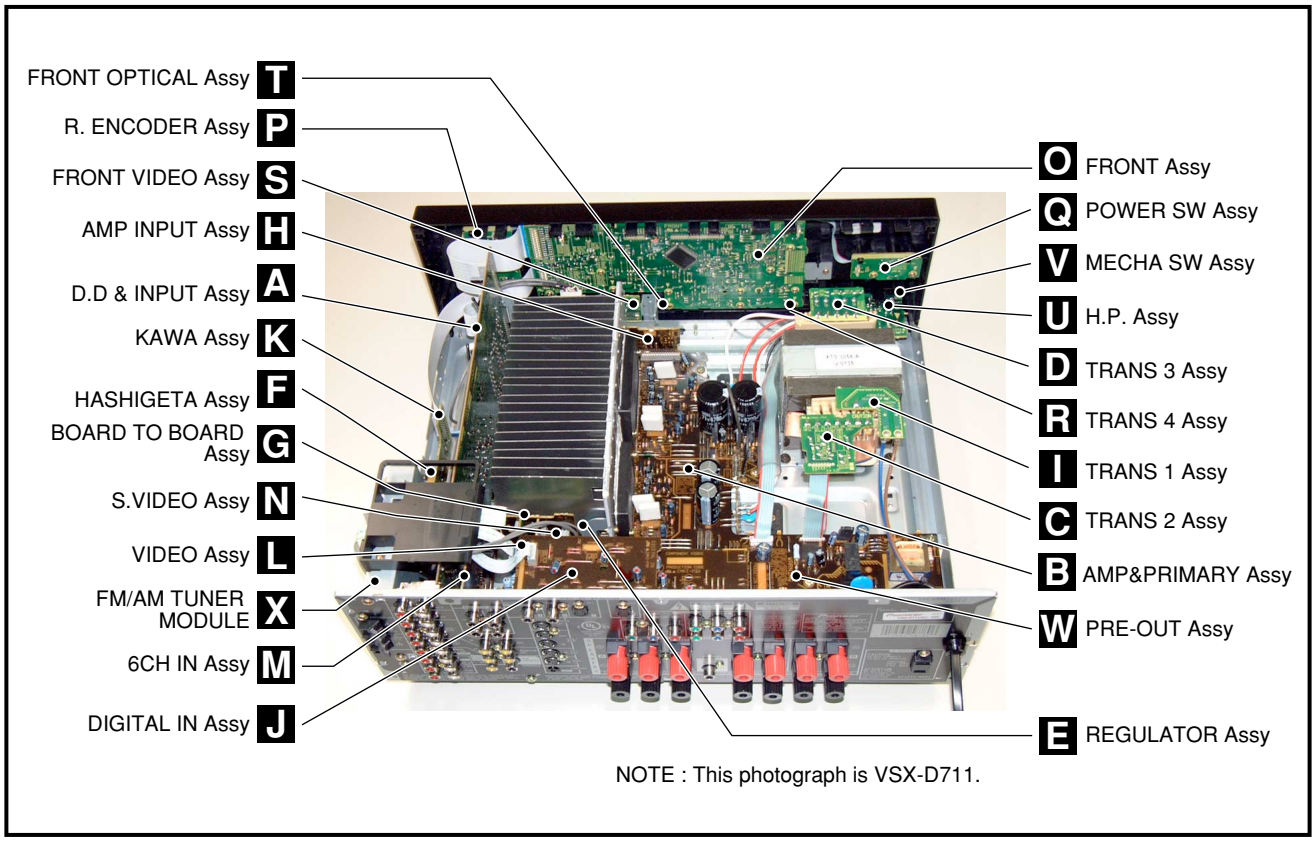


Fig.2 Adjustment Point

7. GENERAL INFORMATION

7.1 PCB LACATION



NOTE : This photograph is VSX-D711.

Note : D.D & INPUT Assy
The pin of function IC (IC101 TC9273F-007) can be checked from side-A by the through-hole round.
The pin No. is printed on the side-A.

Even if the FM/AM TUNER MODULE is disconnected, other functions can operate.

7.2 PARTS
7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

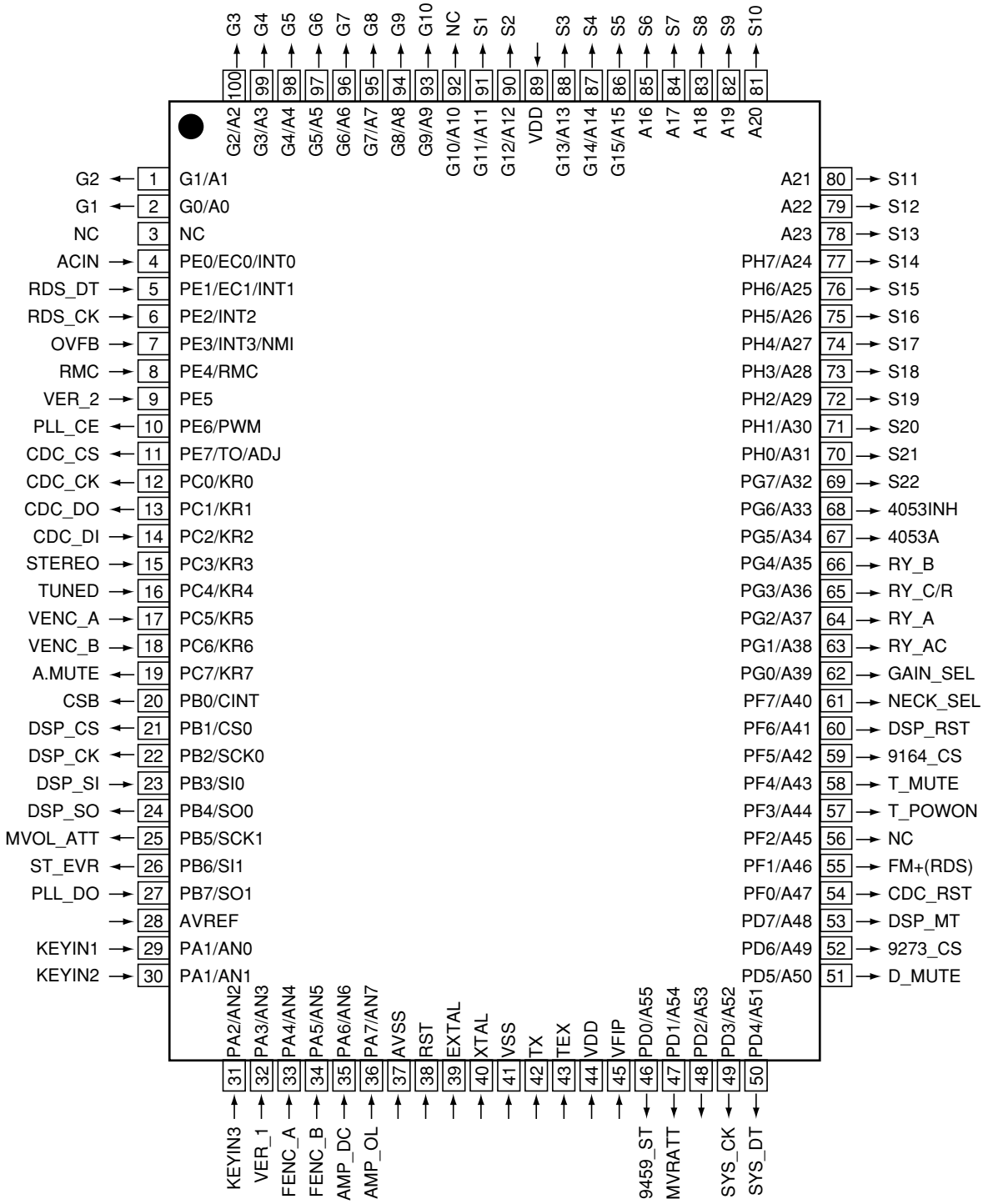
• List of IC

PDG268A, AK4586VQ, BD3812F, NJU7312AM, PD8097A, AK4382AVT

■ PDG268B (FRONT ASSY : IC401)

• System Control MCU

■ Pin Arrangement (Top View)



• Pin Function

No.	Pin Name	I/O	Pin Function	Active
1	G2	O	Grid output 2	H
2	G1	O	Grid output 1	H
3	NC	–	Connect to Vdd	
4	ACIN	I	Input AC pulse	
5	RDS_DT	I	Serial control DATA signal of RDS communication	
6	RDS_CK	I	Serial control CLOCK signal of RDS communication (Use external interrupt)	
7	DIRLOCK	I	ERR/OVER input from CODEC	
8	RMC	I	Remote control signal input (no-carrier signal)	
9	VER_2	I	Destination switch 2	
10	ST_EVR	O	Strobe of communication for E-volume	H
11	CDC_CS	O	Chip serect for CODEC	
12	CDC_CK	O	Control clock for CODEC & TC9164	
13	CDC_DO	O	Control data for CODEC & TC9164	
14	CDC DI	I	Data input from DIR	
15	STEREO	I	Signal to switch Stereo / Monoral	
16	TUNED	I	Condition of TUNED	
17	VENC_A	I	Input from rotary encoder of E-volume (A)	
18	VENC_B	I	Input from rotary encoder of E-volume (B)	
19	HP ON	I	Headphone detect	L
20	CREQ	I	Request for DSP	L
21	CCS	O	Chip select for DSP	L
22	CCK	O	Clock signal for DSP	H
23	CDT	I	DATA input signal for DSP	
24	CSDO	O	DATA output signal for DSP	H
25	FS 96	I	96 k	H
26	AMP_OL	I	Detect overload of protection circuit (L: overload)	H
27	PLL_DO	I	Data input signal for communication with LC72131 (Tuner)	
28	AVref	–	Connect to Vdd	
29	KEYIN1	I	Key input A/D conversion port 1	
30	KEYIN2	I	Key input A/D conversion port 2	
31	KEYIN3	I	Key input A/D conversion port 3	
32	VER_1	I	Input 1 to switch region (A/D input)	
33	FENC_A	I	FUNC Rotary encoder signal input (A)	
34	FENC_B	I	FUNC Rotary encoder signal input (B)	
35	AMP_DC	I	Detect trouble DC of protection circuit (L : Trouble)	L
36	VER_2	I	Input 2 to switch region (A/D input)	L
37	AVSS	–	Connect to Vss	
38	RST	–	Reset	
39	EXTAL	–	Connect to the oscillator (7.2MHz)	
40	XTAL	–		
41	VSS	–	Connect to Vss	
42	TX	–	NC	
43	TEX	–	Connect to Vss	
44	VDD	–	+5V	
45	VFDP	–	-30V	
46	9459_ST	O	Strobe for E-volume (TC9459) of SB	
47	MVRATT	O	ATT control of master volume for E-volume (less than -15dB : L)	H
48				H
49	SYS_DT	O	Data signal for communication with M62446, TC9163, TC9164 and PLL	H
50	SYS_CK	O	Clock signal for communication with M62446, TC9163, TC9164 and PLL	H

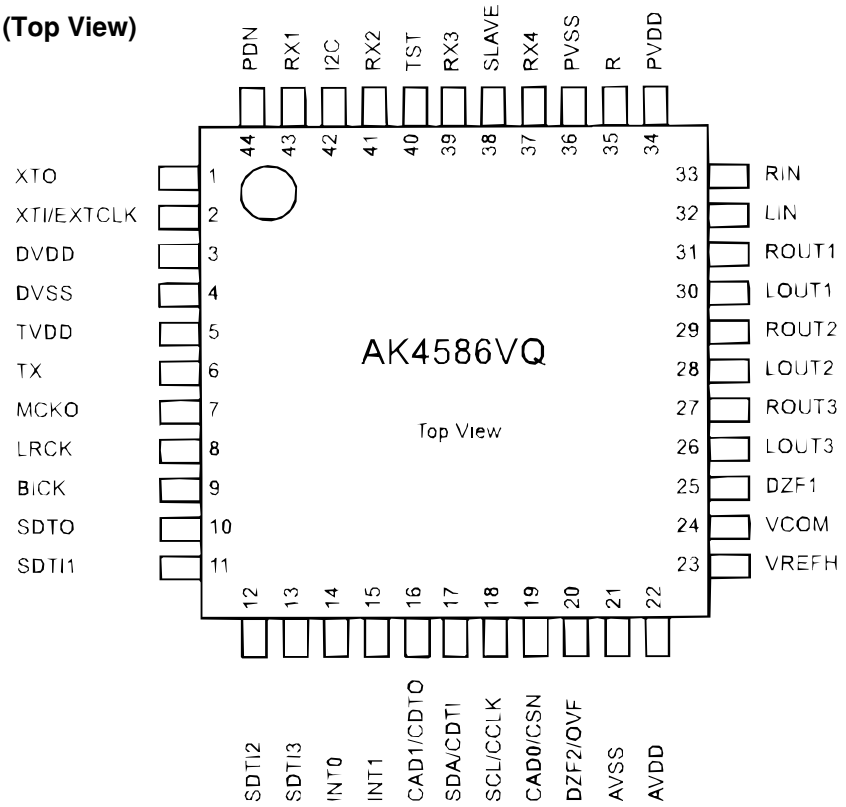
• **Pin Function**

No.	Pin Name	I/O	Pin Function	Active
51	9273_CS	O	Chip select for TC9273	H
52	DSP_MT	O	DSP Mute (ASSY mute)	H
53	GAIN_SEL	O	Gain select (5.1ch and Stereo of analog input : H)	H
54	AMUTE	O	Audio mute	H
55	T_MUTE	O	Tuner mute	H
56	PLL_CE	O	Chip select for communication to LC72131 (Tuner)	
57	NECK_SEL	O	5.1ch, surround mode and A+B Stereo : H / Stereo : L	H
58	FM+(RDS)	O	Tr switch ON/OFF for power supply of RDS decoder (L : AM, power OFF , H : Other)	H
59	9164_ CS	O	TC9163, TC9164 Chip select	
60	CRST	O	Reset for DSP	
61	CDC_PD	O	Power down for CODEC	
62	ABOT	O	Abort for DSP	H
63	RY_AC	O	AC relay ON/OFF	H
64	RY_A	O	Speaker A relay ON/OFF	H
65	RY_C/R	O	Rear/Center Speaker relay ON/OFF	H
66	EXP CS	O	Chip select for expand IC	H
67	EXP OE	O	Chip select for expand IC	H
68	RY_AC	O	AC relay ON/OFF control	H
69	S22	O	Segment output 22	H
70	S21		Segment output 21	
71	S20		Segment output 20	
72	S19		Segment output 19	
73	S18		Segment output 18	
74	S17		Segment output 17	
75	S16		Segment output 16	
76	S15		Segment output 15	
77	S14		Segment output 14	
78	S13		Segment output 13	
79	S12		Segment output 12	
80	S11		Segment output 11	
81	S10		Segment output 10	
82	S9		Segment output 9	
83	S8		Segment output 8	
84	S7		Segment output 7	
85	S6		Segment output 6	
86	S5		Segment output 5	
87	S4		Segment output 4	
88	S3		Segment output 3	
89	VDD	–	5V	
90	S2	O	Segment output 2	H
91	S1		Segment output 1	
92	Not used	O	Not used (Fixed Vfdp)	
93	G10	O	Grid output 10	H
94	G9		Grid output 9	
95	G8		Grid output 8	
96	G7		Grid output 7	
97	G6		Grid output 6	
98	G5		Grid output 5	
99	G4		Grid output 4	
100	G3		Grid output 3	

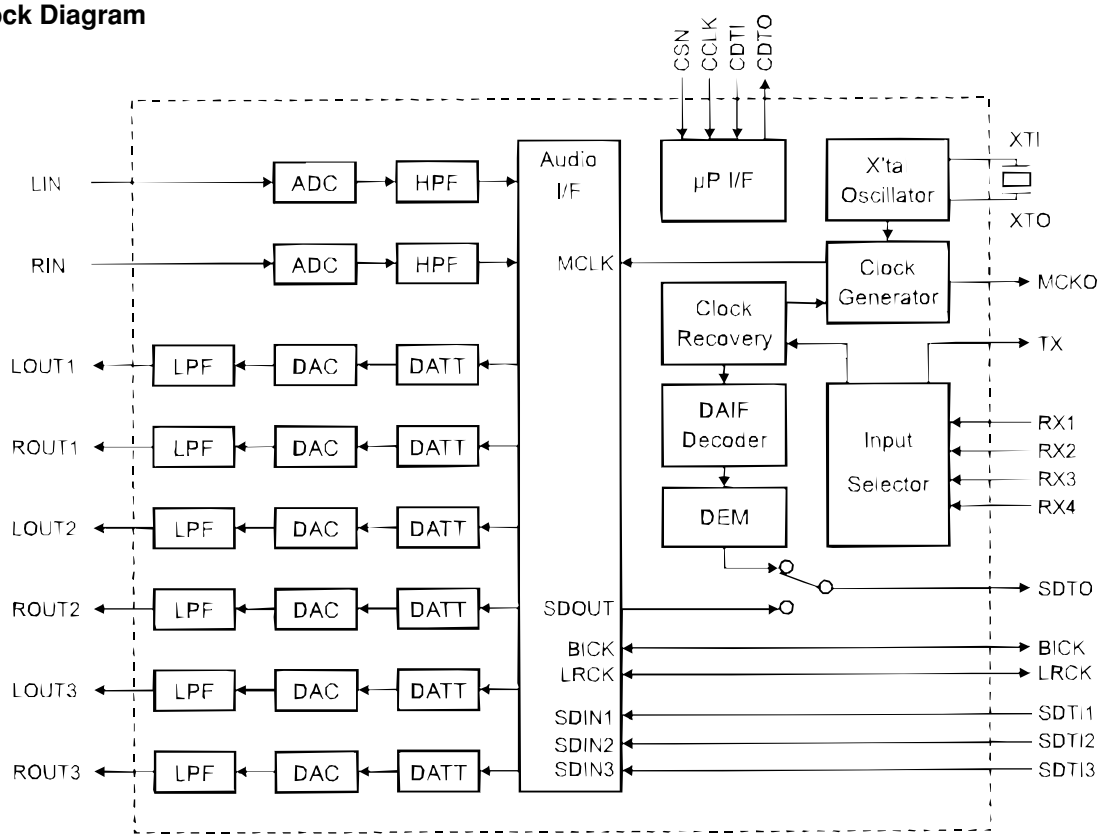
■ AK4586VQ (DD & INPUT ASSY : IC9101)

• 96kHz 24Bit 6-channel CODEC with DIR

■ Pin Arrangement (Top View)



■ Block Diagram



■ Pin / Function

PIN/FUNCTION

No.	Pin Name	I/O	Function
1	XTO	O	X'tal Output Pin
2	XTI	I	X'tal Input Pin
	EXTCLK	I	External Master Clock Input Pin
3	TVDD	-	Output Buffer Power Supply Pin, 2.7V~5.5V
4	DVSS	-	Digital Ground Pin, 0V
5	DVDD	-	Digital Power Supply Pin, 4.5V~5.5V
6	TX	O	Transmit channel (through data) Output Pin
7	MCKO	O	Master Clock Output Pin
8	LRCK	I/O	Input/Output Channel Clock Pin
9	BICK	I/O	Audio Serial Data Clock Pin
10	SDTO	O	Audio Serial Data Output Pin
11	SDTI1	I	DAC1 Audio Serial Data Input Pin
12	SDTI2	I	DAC2 Audio Serial Data Input Pin
13	SDTI3	I	DAC3 Audio Serial Data Input Pin
14	INT0	O	Interrupt 0 pin
15	INT1	O	Interrupt 1 pin
16	CDTO	O	Control Data Output Pin in 4-wire serial control mode
	CAD1	I	Chip Address 1 Pin in I^2C bus control mode
17	CDTI	I	Control Data Input Pin in 4-wire serial control mode
	SDA	I/O	Control Data Input/Output Pin in I^2C bus control mode
18	CCLK	I	Control Data Clock Pin in 4-wire serial control mode
	SCL	I	Control Data Clock Pin in I^2C bus control mode
19	CSN	I	Chip Select Pin in 4-wire serial control mode
	CAD0	I	Chip Address 0 Pin in I^2C bus control mode
20	DZF2	O	Zero Input Detect 2 Pin (Note 1) When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H".
	OVF	O	Analog Input Overflow Detect Pin (Note 2) This pin goes to "H" if the analog input of Lch or Rch is overflows.
21	AVSS	-	Analog Ground Pin, 0V
22	AVDD	-	Analog Power Supply Pin, 4.5V~5.5V

■ Pin / Function

No.	Pin Name	I/O	Function
23	VREFH	I	Positive Voltage Reference Input Pin, AVDD
24	VCOM	O	Common Voltage Output Pin, AVDD/2 Large external capacitor around 2.2μF is used to reduce power-supply noise.
25	DZF1	O	Zero Input Detect 1 Pin (Note 1) When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H".
26	LOUT3	O	DAC3 Lch Analog Output Pin
27	ROUT3	O	DAC3 Rch Analog Output Pin
28	LOUT2	O	DAC2 Lch Analog Output Pin
29	ROUT2	O	DAC2 Rch Analog Output Pin
30	LOUT1	O	DAC1 Lch Analog Output Pin
31	ROUT1	O	DAC1 Rch Analog Output Pin
32	LIN	I	Lch Analog Input Pin
33	RIN	I	Rch Analog Input Pin
34	PVDD	-	PLL Power Supply Pin, 4.5V~5.5V
35	R	-	External Resistor Pin 18kΩ +/-1% resistor to PVSS externally.
36	PVSS	-	PLL Ground Pin, 0V
37	RX4	I	Receiver Channel 4 Pin (Internal biased pin)
38	SLAVE	I	Slave Mode Pin "L": Master mode or Slave mode, "H": Slave mode
39	RX3	I	Receiver Channel 3 Pin (Internal biased pin)
40	TST	I	Test Pin This pin should be connected to DVSS.
41	RX2	I	Receiver Channel 2 Pin (Internal biased pin)
42	I2C	I	Control Mode Select Pin "L": 4-wire Serial, "H": I^2C Bus
43	RX1	I	Receiver Channel 1 Pin (Internal biased pin)
44	PDN	I	Power-Down & Reset Pin When "L", the AK4586 is powered-down, all output pins go to "L" and the control registers are reset to default state. If the state of CAD1-0 changes, then the AK4586 must be reset by PDN.

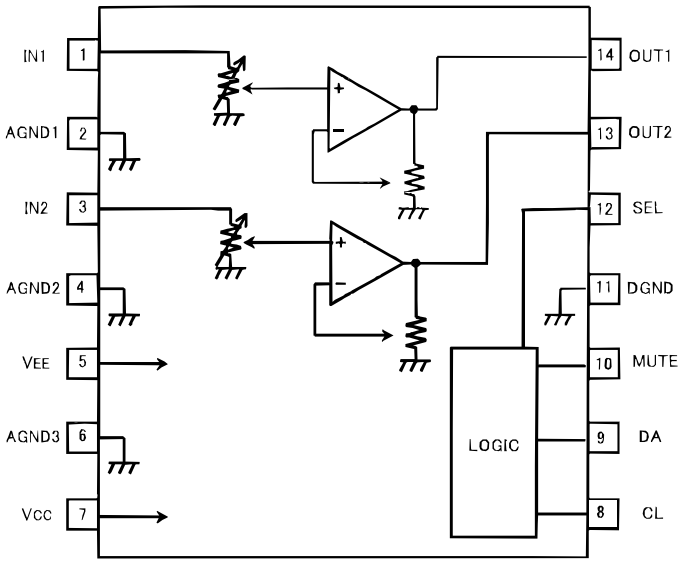
Notes:

1. The group 1 and 2 can be selected by DZFM2-0 bits.
2. This pin becomes OVF pin if OVFE bit is set to "1".
3. All input pins except internal biased pins should not be left floating.

■ BD3812F (D.D & INPUT ASSY : IC112)

- **Audio Sound Processor**

• Block Diagram



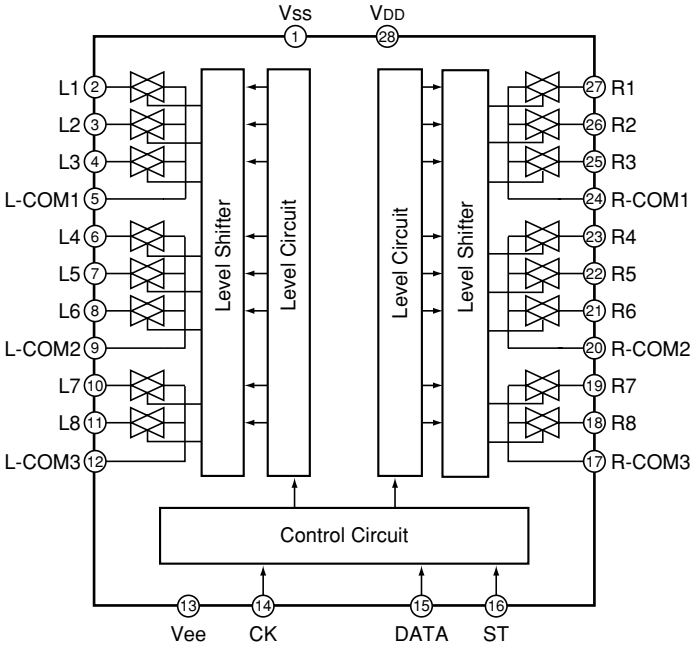
• Pin Function

No.	Pin Name	Function
1	IN1	1ch input terminal
2	AGND1	Analog ground terminal
3	IN2	2ch input terminal
4	AGND2	Analog ground terminal
5	Vee	(-) Power supply terminal
6	AGND3	Analog ground terminal
7	Vcc	(+) Power supply terminal
8	CL	Serial clock input terminal
9	DA	Serial data an latch input terminal
10	MUTE	Mute terminal
11	DGND	Ground terminal for comparator
12	SEL	Serial data select terminal
13	OUT2	2ch output terminal
14	OUT1	1ch output terminal

■ NJU7312AM (D.D & INPUT ASSY : IC102)

- **Analog Switch Array**

• Block Diagram



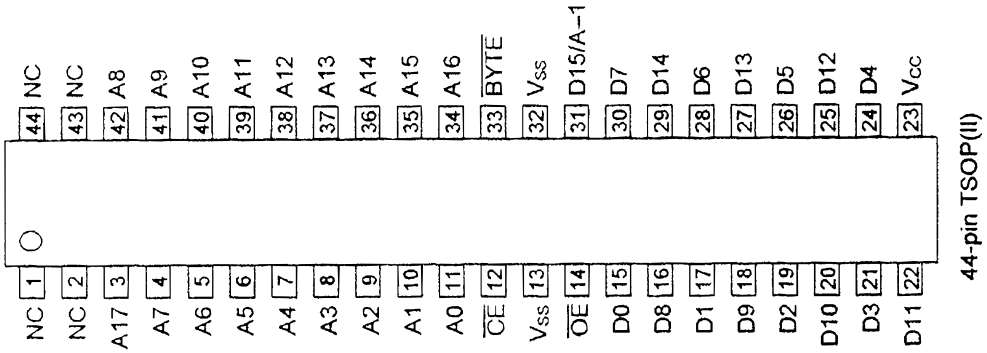
• Pin Function

No.	Pin Name	Function
1	VSS	Minus Power Supply
2, 27	L1,R1	Input and Output
3, 26	L2,R2	
4, 25	L3,R3	
5, 24	COM1	
6, 23	L4,R4	
7, 22	L5,R5	
8, 21	L6,R6	
9, 20	COM2	
10, 19	L7,R7	
21, 18	L8,R8	
26, 17	COM3	
13	GND	Digital Ground
14	CK	Clock Input
15	DATA	Data Input
16	ST	Strobe Input
28	VDD	Plus Power Supply

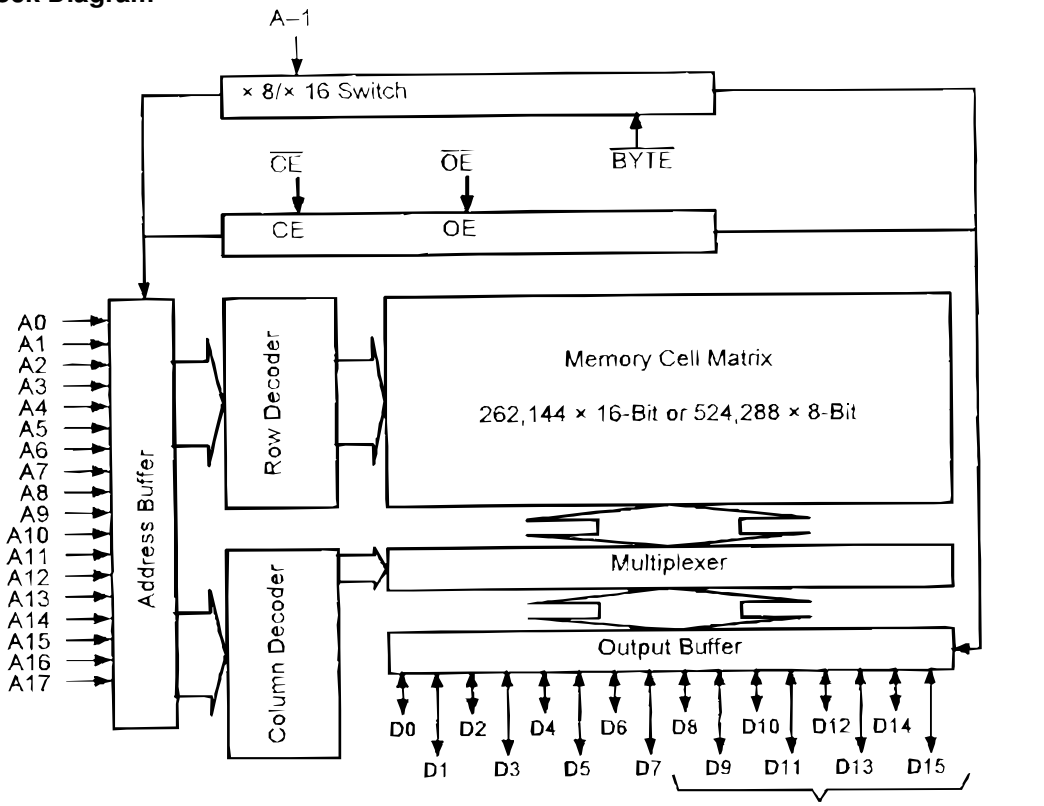
■ PD8097A (D.D & INPUT ASSY : IC9504)

• **4Mb P2ROM**

■ Pin Arrangement (Top View)



■ Block Diagram

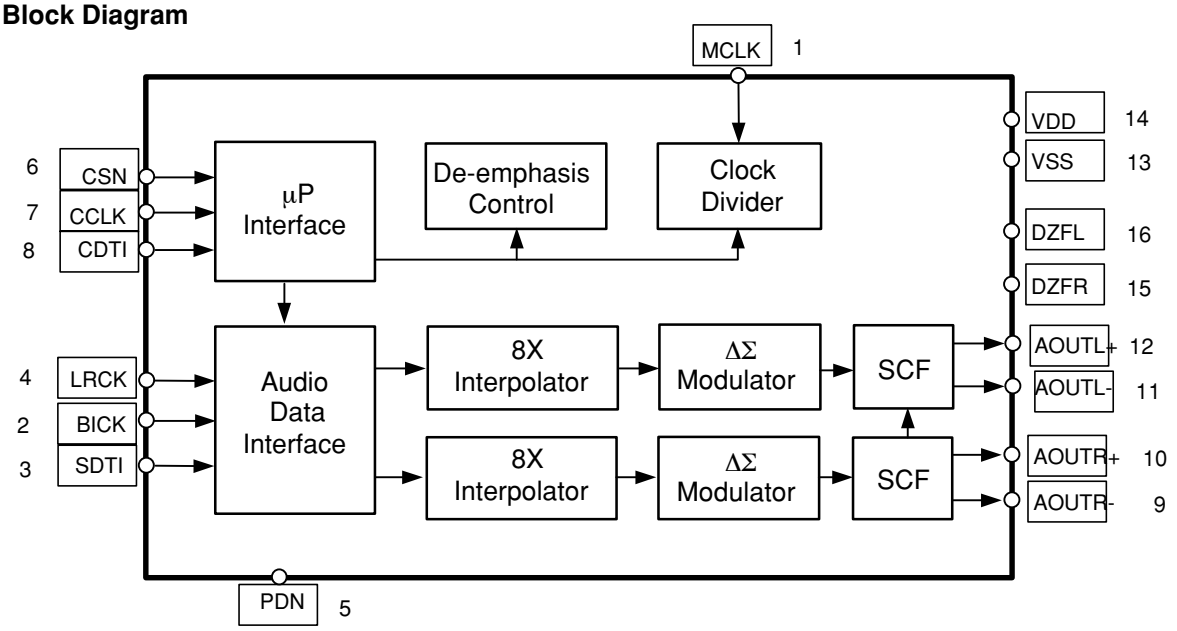


In 8-bit output mode, these pins are placed in a high-Z state and pin D15 functions as the A-1 address pin.

■ AK4382AVT (DD & INPUT ASSY : IC9102)

• D/A Converter IC

■ Block Diagram



■ Pin Function

Pin / Function

No.	Pin Name	I/O	Function
1	MCLK	I	Master Clock Input Pin An external TTL clock should be input on this pin.
2	BICK	I	Audio Serial Data Clock Pin
3	SDTI	I	Audio Serial Data Input Pin
4	LRCK	I	L/R Clock Pin
5	PDN	I	PowerDown Mode Pin When at "L", the AK4382 is in the power down mode and is held in reset. The AK4382 should always be reset upon power-up.
6	CSN	I	Chip Select Pin
7	CCLK	I	Control Data Input Pin
8	CDTI	I	Control Data Input Pin
9	AOUTR-	O	Rch Negative Analog Output Pin
10	AOUTR+	O	Rch Positive Analog Output Pin
11	AOUTL-	O	Lch Negative Analog Output Pin
12	AOUTL+	O	Lch Positive Analog Output Pin
13	VSS	-	Ground Pin
14	VDD	-	Power Supply Pin
15	DZFR	O	Rch Data Zero Input Detect Pin
16	DZFL	O	Lch Data Zero Input Detect Pin

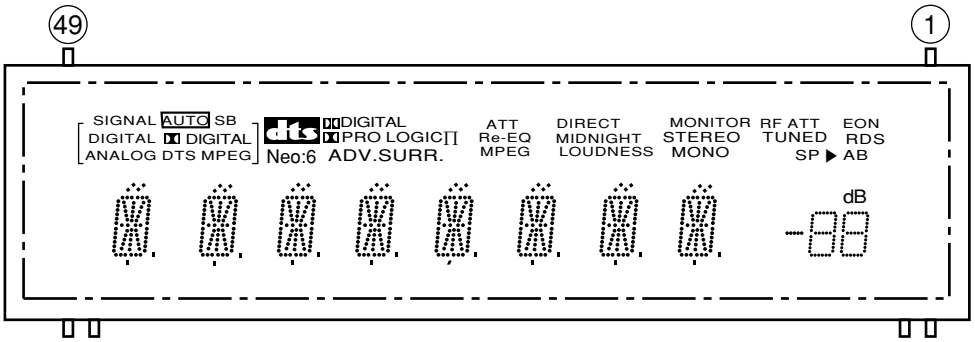
Note: All input pins should not be left floating.

7.2.2 DISPLAY

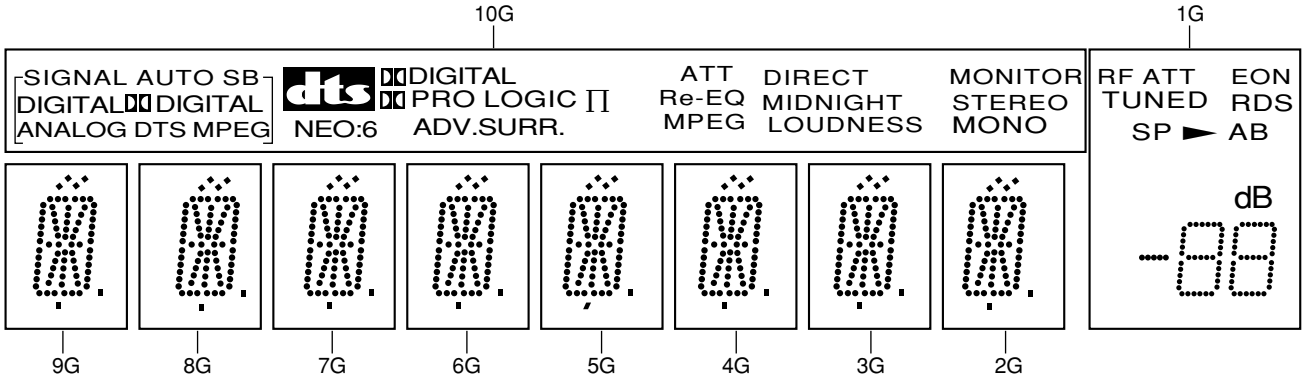
■ XAV3013 (FRONT ASSY : V401)

• FL DISPLAY

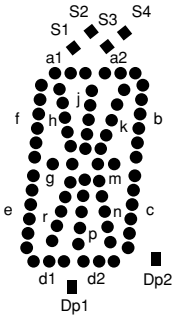
• Pin Assignment



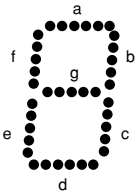
• Grid Assignment



• Segment Designation



(9G to 2G)



(1G)

• Pin Connection

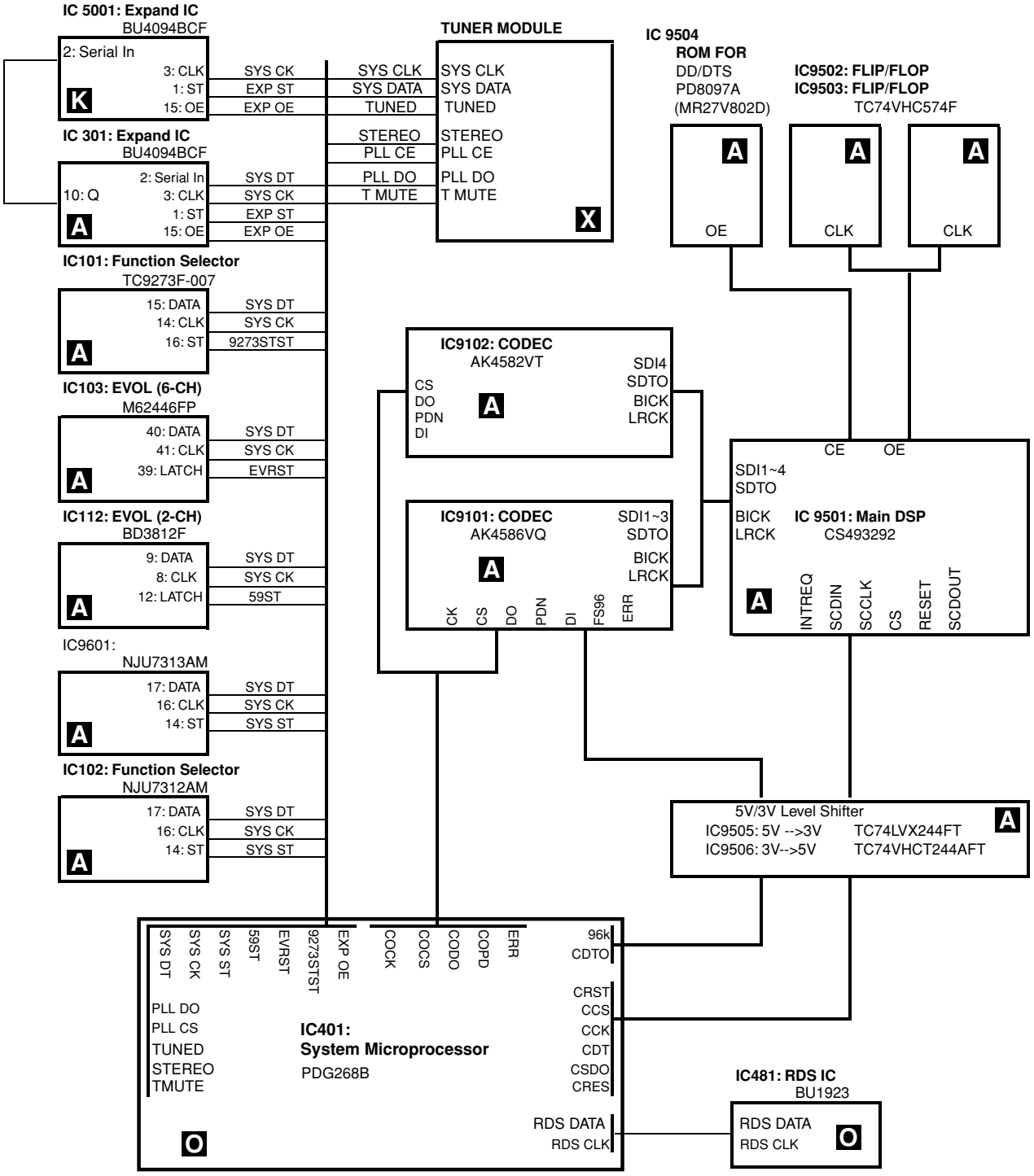
Pin No.	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
Connection	F2	F2	NP	NP	P22	P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2
Pin No.	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
Connection	P1	NX	NX	NX	NX	NX	NX	NX	NX	NX	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	F1	F1	

NOTE 1) F1, F2..... Filament
2) NP..... No pin
3) NX..... No extend pin
4) DL..... Datum Line
5) 1G to 10G..... Grid
6) Field of vision is a minimum of 21.8° from the lower side.

• Anode Connection

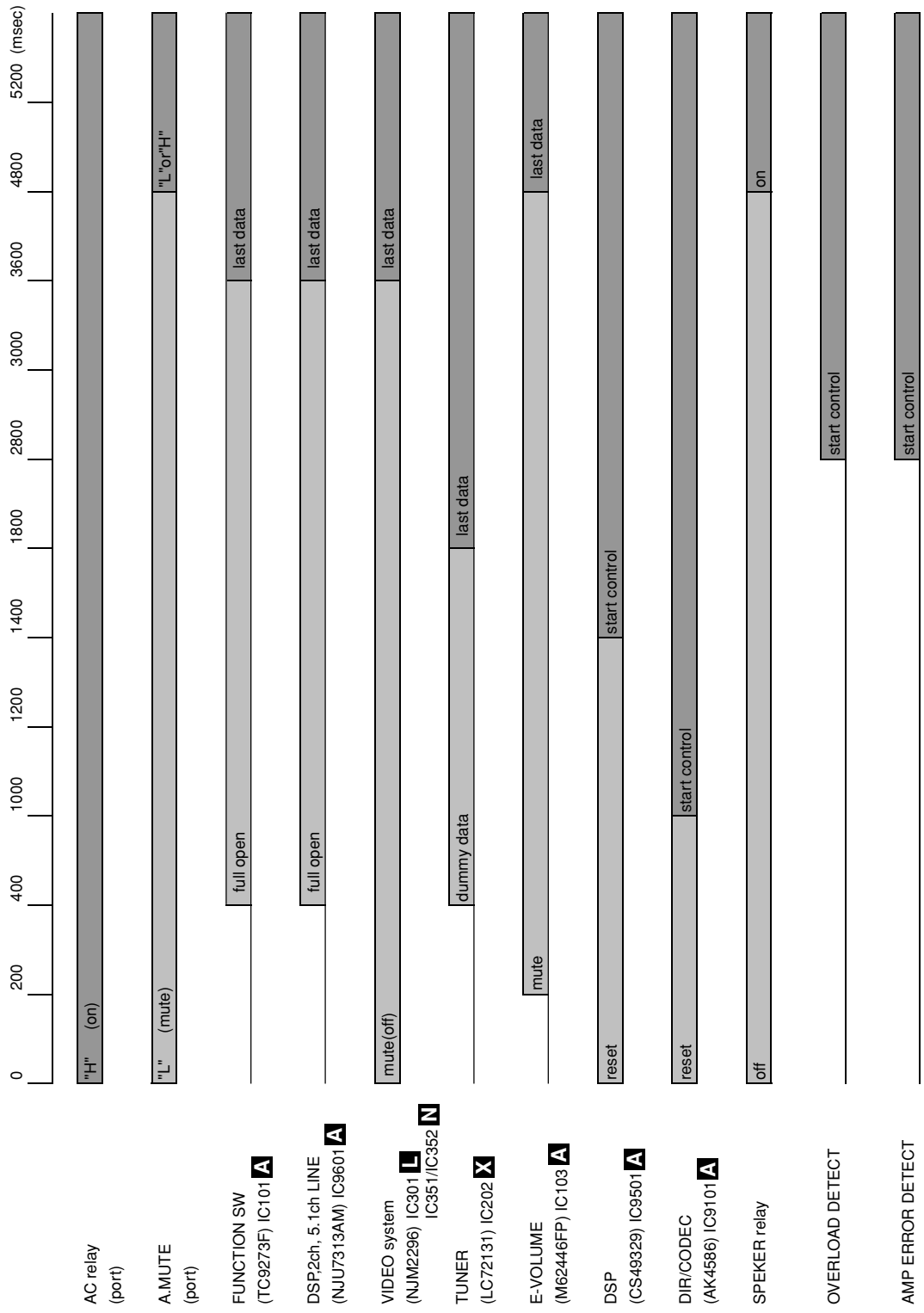
	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S1	a1	a1	a1	a1	a1	a1	a1	a1	RFATT
P2	AUTO	a2	a2	a2	a2	a2	a2	a2	a2	EON
P3	SB	h	h	h	h	h	h	h	h	○
P4	DIGITAL	j	j	j	j	j	j	j	j	TUNED
P5	ANALOG	k	k	k	k	k	k	k	k	RDS
P6	DIGITAL (L)	b	b	b	b	b	b	b	b	S1
P7	DTS	f	f	f	f	f	f	f	f	A
P8	MPEG	m	m	m	m	m	m	m	m	B
P9	dts	g	g	g	g	g	g	g	g	1a
P10	MPEG	c	c	c	c	c	c	c	c	1b
P11	DIGITAL (R)	e	e	e	e	e	e	e	e	1f
P12	PROLOGIC ∏	r	r	r	r	r	r	r	r	1g
P13	Neo:6	p	p	p	p	p	p	p	p	1c
P14	ATT	n	n	n	n	n	n	n	n	1e
P15	ADV.SURR.	d1	d1	d1	d1	d1	d1	d1	d1	1d
P16	Re-EQ	d2	d2	d2	d2	d2	d2	d2	d2	2a
P17	DIRECT	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	2b
P18	MIDNIGHT	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	2f
P19	LOUDNESS	S1	S1	S1	S1	S1	S1	S1	S1	2g
P20	MONITOR	S4	S4	S4	S4	S4	S4	S4	S4	2c
P21	STEREO	S2	S2	S2	S2	S2	S2	S2	S2	2e
P22	MONO	S3	S3	S3	S3	S3	S3	S3	S3	2d

7.3 EXPLANATION
7.3.1 U-COM BLOCK DIAGRAM

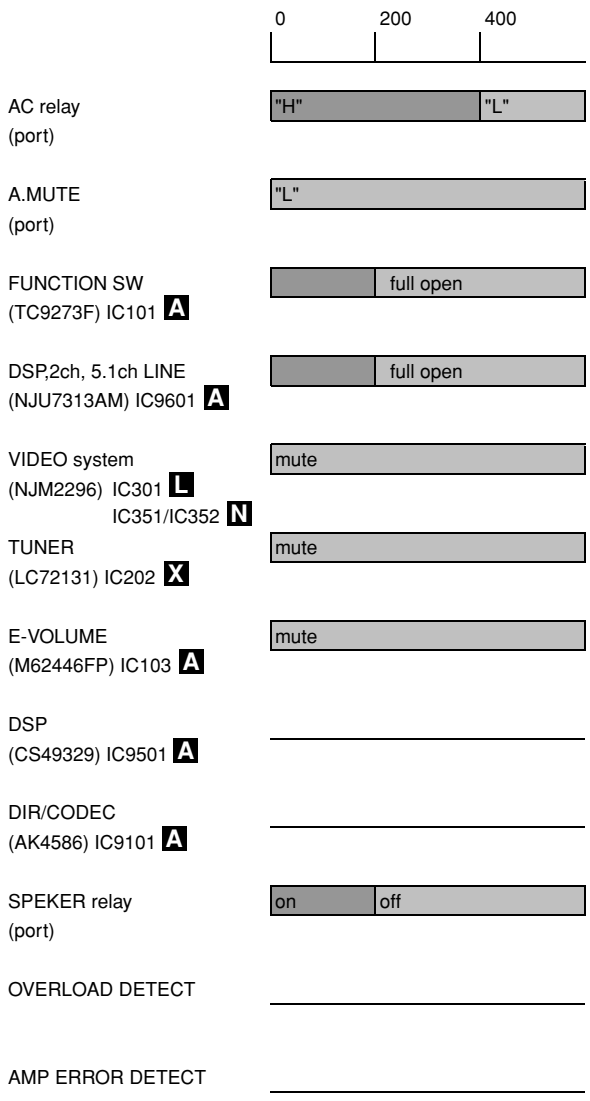


7.3.2 POWER ON AND OFF SEQUENCE

■ **POWER ON SEQUENCE**



■ POWER OFF SEQUENCE



7.3.3 PROTECTION CIRCUIT

1. DC abnormal detection

It processes more preferentially than overload detection.

When detected DC abnormal, A.MUTE* is on and speaker relay is off, then flash "AMP_ERR" on display.

*A.MUTE : Audio mute command

↓

An unusual state continues for 3 seconds.

↓ continuation

A power supply is shut off.

↓

The power key cannot be effective for 60 seconds

↓ return

A program is performed from the beginning.

If the AC plug is pulled off within 60 sec, and then it is plugged in again, the unit will be reset for 60 sec.

2. Overload detection

When detected overload, A.MUTE* is on and speaker relay is off, then flash "OVERLOAD" on display.

↓

An unusual state continues for 3 seconds.

↓ continuation

A power supply is shut off.

↓ return

A power supply is shut off even if it returns.

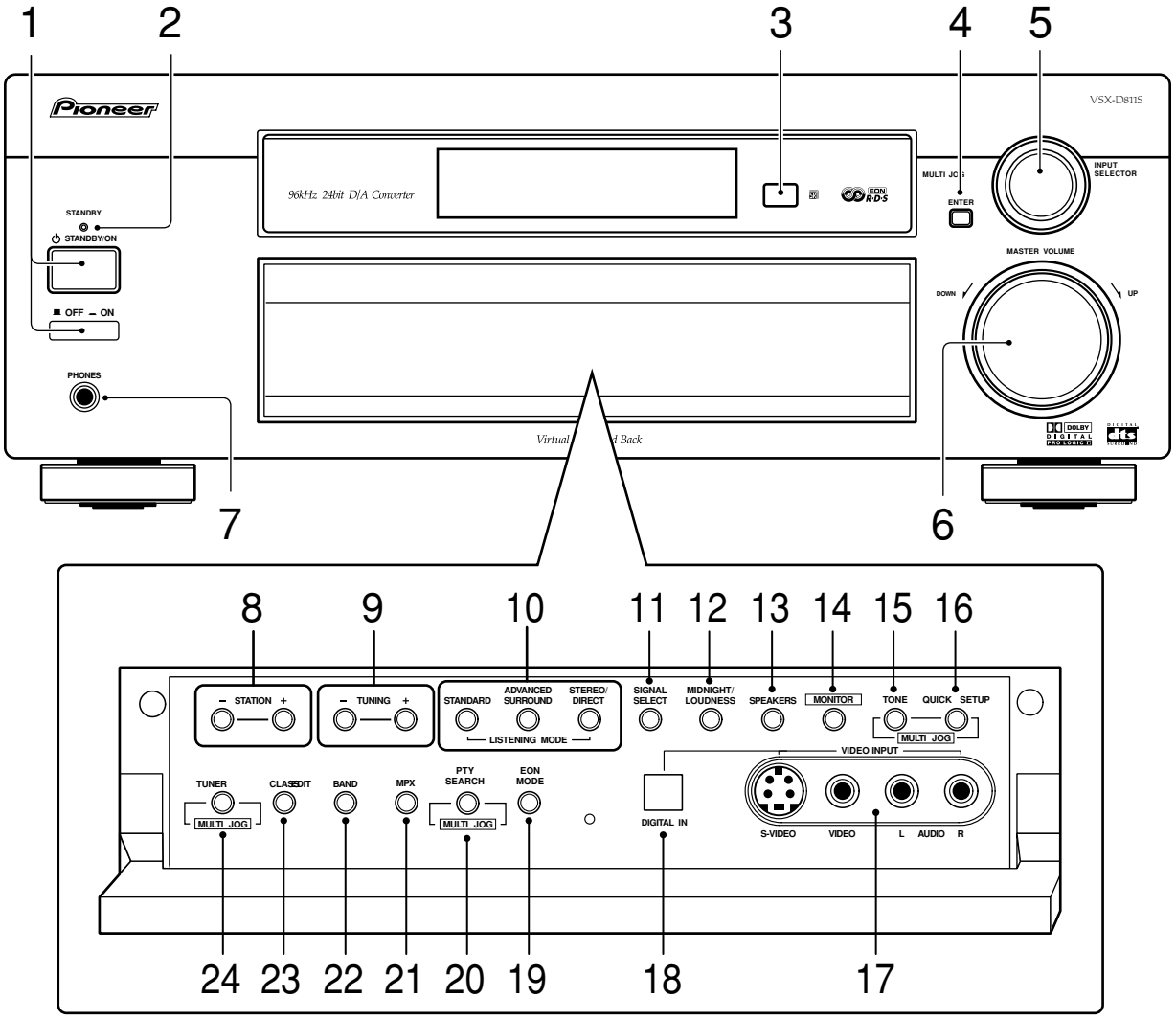
7.4 CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. PANEL FACILITIES

Front panel



1 ⏻ STANDBY/ON-power ▮ OFF ▁ ON button

STANDBY/ON switches the receiver between on and standby. The power button switches the receiver off.

2 STANDBY indicator

Lights when the receiver is in standby.

3 Remote sensor

Receives the signals from the remote control.

4 ENTER

5 MULTI JOG/INPUT SELECTOR dial

The MULTI JOG/INPUT SELECTOR dial performs a number of tasks. Use it to select options after pressing TONE CONTROL, QUICK SETUP, TUNER EDIT or PTY SEARCH.

6 MASTER VOLUME

7 PHONES jack

Use to connect headphones. When the headphones are connected, there is no sound output from the speakers.

8 STATION (+/–) buttons

Selects station presets when using the tuner.

9 TUNING buttons

Selects the frequency when using the tuner.

10 LISTENING MODE buttons

STANDARD

Press for Standard decoding and to switch between the various Pro Logic II options.

ADVANCED SURROUND

Use to switch between the various surround modes.

STEREO/DIRECT

Switches direct playback on or off. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

11 SIGNAL SELECT
Use to select between input signals.

12 MIDNIGHT/LOUDNESS
Use Midnight when listening to movie soundtracks at low volume.
Use Loudness to boost the bass and treble at low volume.

13 SPEAKERS
Use to cycle through the speaker system: A → B → A+B

14 MONITOR
Press to switch tape monitoring on/off.

15 TONE
Press this button to access the bass and treble controls, which you can then adjust with the MULTI JOG/INPUT SELECTOR dial.

16 QUICK SETUP

17 VIDEO INPUT

18 DIGITAL IN

19 EON MODE
Use to search for different programs that are transmitting traffic or news information (this search method is called EON).

20 PTY SEARCH
Use to search for different program types in RDS mode.

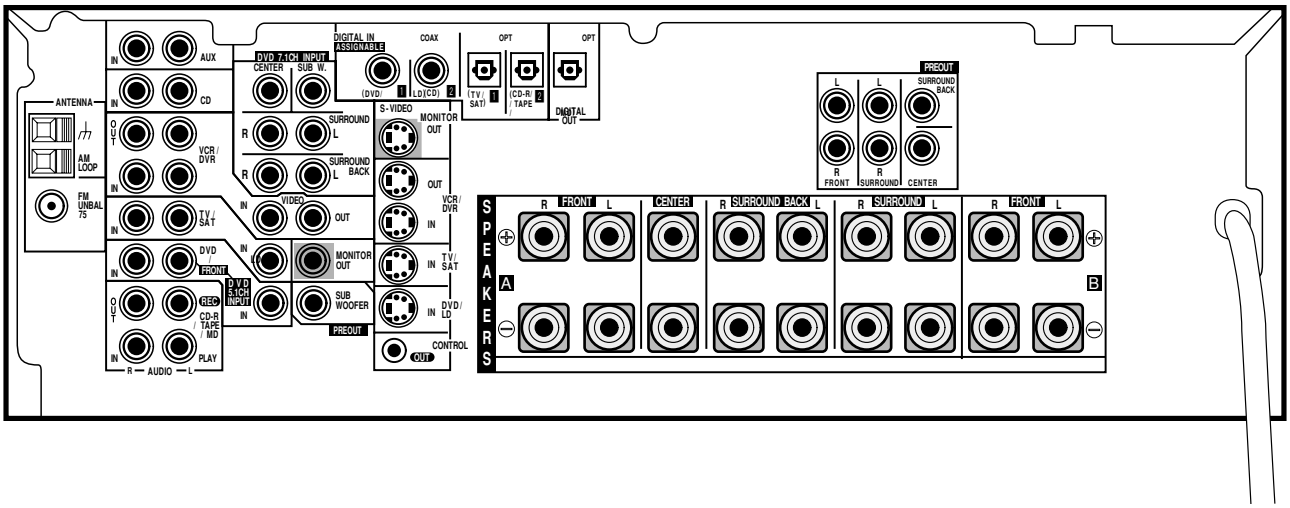
21 MPX
Press to receive a radio broadcast in mono.

22 BAND
Switches between AM and FM radio bands.

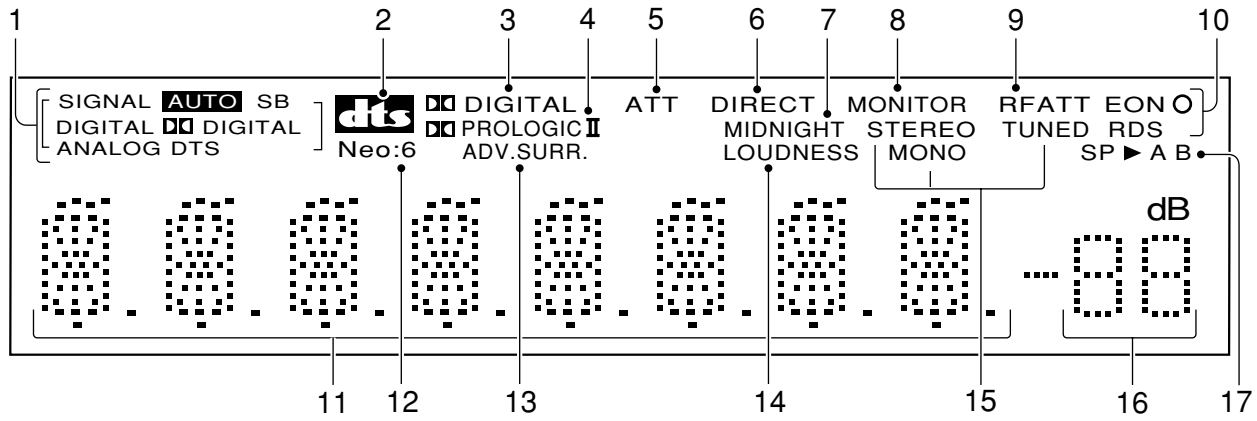
23 CLASS
Switches between the three banks (classes) of station presets.

24 TUNER EDIT
Use for memorizing and naming stations.

Rear Panel



Display



1 SIGNAL SELECT indicators
Lights to indicate the type of input signal assigned for the current component:

AUTO
Lights when AUTO signal select is on

SB
Depending on the source, this lights when a signal with surround back channel encoding is detected.

DIGITAL
Lights when a digital audio signal is detected.

DIGITAL
Lights when a Dolby Digital encoded signal is detected.

ANALOG
Lights when an analog signal is detected.

DTS
Lights when a source with DTS encoded audio signals is detected.

2 DTS
When the Standard mode of the receiver is on, this lights to indicate decoding of a DTS signal.

3 DIGITAL
When the Standard mode of the receiver is on, this lights to indicate decoding of a Dolby Digital signal.

4 PRO LOGIC II
When the Standard mode of the receiver is on, this lights to indicate Pro Logic II decoding.

5 ATT
Lights when INPUT ATT is used to attenuate (reduce) the level of the analog input signal.

6 DIRECT
Lights when source direct playback is in use. This function bypasses all tone, balance, Advanced Surround, and Dolby Surround effects.

7 MIDNIGHT
Lights during Midnight listening.

8 MONITOR
Lights when MONITOR is selected.

9 RF ATT
Lights when the RF ATT is on.

10 EON and ○
The ○ indicator lights to inform you that the currently tuned station carries the EON data service. When the EON mode is set, the EON indicator lights, but during actual reception of an EON broadcast the EON indicator will flash.

RDS
Lights when an RDS broadcast is received.

11 Character display

12 Neo:6
Lights during NEO:6 processing

13 ADV. SURR (Advanced Surround)
Lights when one of the Advanced Surround modes has been selected.

14 LOUDNESS
Lights when LOUDNESS has been selected.

15 TUNER indicators

STEREO:
Lights when a stereo FM broadcast is being received in auto stereo mode.

MONO:
Lights when the mono mode is set using the
MPX button.

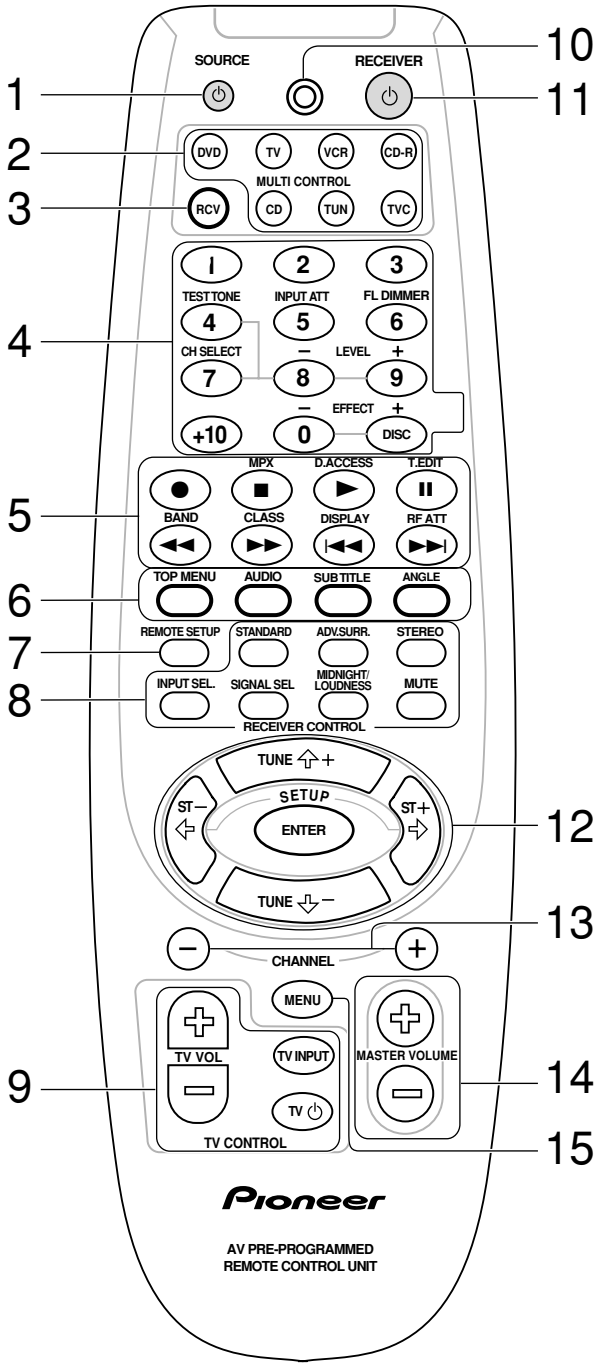
TUNED:
Lights when a broadcast is being received.

16 Master volume level
Shows the overall volume level. ---dB indicates the minimum level, and –0 dB indicates the maximum level.

Depending on your level settings for each channel, the maximum level can range between –10 dB and –0 dB.

17 Speaker indicator
Shows the speaker system currently in use.

Remote control



1 ⏻ SOURCE
Press to turn on/off other components connected to the receiver.

2 MULTI CONTROL buttons
Press to select control of other components (see Controlling the rest of your system).

3 RCV
Use to switch to the receiver controls on the remote control (ex. INPUT ATT, FL. DIMMER). Also use this button to set up surround sound.

4 Number buttons/Receiver controls
Use the number buttons to directly select a radio frequency or the tracks on a CD, DVD, etc.

DISC
The button's use depends on the component selected.

Receiver Controls
Press the RCV button first to access the functions above the number buttons. The display flashes when it isn't possible to use a function.

TEST TONE
Sounds the test tone when setting up the surround sound of the receiver.

INPUT ATT
Attenuates (lowers) the level of an analog input signal to prevent distortion.

FL DIMMER
Dims or brightens the display.

CH SELECT
Selects a speaker when setting up the surround sound of the receiver.

LEVEL +/–
Adjusts the levels of the surround sound of the receiver.

EFFECT +/– buttons
Adds or subtracts the amount of effect with different advanced listening modes (except 5 or 6 Ch Stereo and Virtual SB).

5 Component/Tuner controls
The main buttons (►, ■, etc.) are used to control a component after you have selected it using the MULTI CONTROL buttons. The tuner/DTV controls above these buttons can be accessed after you have selected the corresponding MULTI CONTROL button (TUNER or DVD (when connected to DTV)).

MPX
Switches between stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality. Also acts as a stop button for CDs, tapes, or DVDs.

D. ACCESS
After pressing, you can access a radio station directly using the number buttons.

T. EDIT
Use for memorizing and naming stations.

BAND
Switches between the tuner AM and FM bands.

CLASS
Switches between the three banks (classes) of radio station presets.

DISPLAY
Use to switch the display between tuner displays (including RDS information).

RF ATT
Use to lower the input level of a radio signal that is too powerful or contains interference that causes the sound to distort.

6 DVD controls (Press DVD first to access)
These controls will also function as DTV controls, depending on the component you've selected.

TOP MENU
Displays the disc 'top' menu of a DVD.

AUDIO
Changes the audio language or channel.

SUBTITLE
Displays/changes the subtitles included in multilingual DVD-Video discs.

ANGLE
Switches camera angles on discs with multi-angle scenes.

7 REMOTE SETUP
Press this button to set up the remote control to control other components.

8 RECEIVER CONTROL buttons

STANDARD
Press to switch between the various Dolby/DTS modes.

ADV. SURR.
Use to switch between the various surround modes.

STEREO
Switches direct playback on or off. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

INPUT SEL
Use to select the input source.

SIGNAL SEL
Use to select between input signals.

MIDNIGHT/LOUDNESS
Switches to Midnight or Loudness listening.

MUTE
Mutes the sound (or restores the sound if it has been muted).

9 TV control buttons
These buttons are dedicated to control the TV assigned to the TVC button. Thus if you only have one TV to hook up to this system assign it to the TVC MULTI CONTROL button. If you have two TVs, assign the main TV to the TVC button.

TV VOL +/–
Use to adjust the volume on your TV.

TV INPUT
Use select the TV function.

TV ⏻
Use to turn on/off the power of the TV.

10 LED DISPLAY
This display flashes when a command is sent from the remote control.

11 RECEIVER ⏻
This switches between standby and on for this receiver.

12 ⇦⇨⇩⇧ (TUNE/ST +/–) /ENTER
Use the arrow buttons when setting up your surround sound system (see pages 65–76). Also used to control DVD menus/options and for deck 1 of a double cassette deck player. Use the TUNE +/– buttons to find radio frequencies and use ST +/– to find preset stations.

13 CHANNEL +/–
Select radio station presets. Also skip tracks backward or forward on CDs, DVDs, etc.

14 MASTER VOLUME +/–
Use to set the listening volume.

15 MENU button
Displays the disc menu of DVD-Video discs. It also displays TV and DTV menus.